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Màster Universitari en Enginyeria Industrial (MUEI)

An analysis of the Spanish economy (1960 - 2017)

The causes and consequences of contemporary
Spanish economic evolution
(and some guidelines for improvement)

MEMÒRIA

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Convocatòria: Juny, 2018



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“Sábete, Sancho, que no es un hombre más que otro, si no hace más que otro”

(1st part, chapter XVIII, *El ingenioso hidalgo don Quijote de la Mancha*, Miguel de Cervantes)

Abstract

This work describes, analyses and interprets the main trends that can be found in the evolution and development of the Spanish economy from 1960 to 2018, in order to localize the fundamental causes and consequences of such behaviour which, in turn, will help to build up the main guidelines to follow for the future improvement of the Spanish economy. Through a deep analysis of various indicators and an historical account of the Spanish economy, we will find that the main cause for many of the anomalies, deficiencies and problems faced by the Spanish economy in the last decades was the conscious creation, development and consolidation of an economic system primarily based on a low-productivity service sector, cheap tourism and, very especially, a Great Real Estate and Housing Bubble. Other indirect causes were the availability of cheap capital and plenty of financing opportunities derived from the entrance of Spain in the European Community and the European Monetary Union, financing that was, for the most part, badly used. Finally, a profound reform of the Spanish economy needs to be undertaken if Spain wants to maintain a path of long-term economic growth and prosperity while maintaining the sustainability of the State and, more importantly, the Nation.

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1 INTRODUCTION: OF HOW SPAIN EMERGES AS AN INTERESTING BUT OFTEN ANOMALOUS CASE IN TERMS OF ECONOMIC EVOLUTION

After the crisis of 2008, Spain has found itself immersed in a very long recovery of more than ten years, from which a successful outcome is still not perceived. Despite the fact that during these years reforms have been made - often insufficient and not really where they should have been done - Spain has not resurfaced successfully from the crisis it suffered. This crisis in Spain, although it coincided in time with that of all other developed countries right after the Great Financial Crisis in the US in 2008, has very specific characteristics and a genealogy incredibly peculiar to the Spanish case.

The following work aims mainly at describing and explaining the ultimate causes of the severity of the crisis in Spain, the weak recovery and the imperative need for major reforms in Spain, not only to successfully recover the economy from the trouble brought by the crisis, but to ensure the sustainable development of the Spanish State and, above it and more importantly, ensure the economic, but not only, sustainability of the Nation. The questions to be asked and for which this work will try to find an answer are two; namely: where are we coming from and where are we supposed to go.

For this, first of all it was absolutely necessary to expose in an objective and measured way the development of the Spanish economy since 1960. I chose to do the analysis from this year because 1960 is the year in which the Spanish economy really takes off and leaves much of the peculiar system imposed after the Civil War¹ and, also, because in this decade are carried out a series of reforms of great importance in the economy that will have an important influence in the following decades and that certainly help to better understand the subsequent developments. For this analysis it is especially important to give an overall picture of the Spanish economy, analyzing the main economic indicators, seeing their evolution and development over time and perceiving the anomalies – which, as the reader will see, are many, and very typical of the Spanish socio-politico-economic configuration - that the data shows and which will have to be explained. With this first analysis, which is essential to get a correct idea of what has happened in Spain in recent decades, I try to give an objective basis of what has been the actual development in the Spanish economy in recent years, seeing in a real and objective way its development through an exhaustive analysis, and leaving aside the common places.

After this first analysis, the next objective is to locate and explain the major problems, anomalies or strangeness that are either typical of the Spanish development, or can be causes that explain the severity of the crisis, or either, are important aspects to take into account when analyzing the Spanish economy, by itself or in relation to other developed economies. All these aspects require, without a doubt, an explanation and the objective of this part is to list those that I consider most important, to trace a genealogy and give a convincing explanation that allows a better understanding of what has happened. This second analysis in turn allows us to complete the first one, as we will be able to account in a more concrete way those aspects that allow me explain the very different tendencies that Spain has gone through over the decades, tendencies that led to the Great Crisis of 2008 which is followed by a long, painful and hard recovery, which must also be accounted for. In short, this part is a more in-depth analysis of those interesting

¹ A military government that takes power over the State and governs it autocratically, although with not as much power over the Nation as sometimes thought; however, the Nation itself, which has always maintained an anarchic, independent character, decides, based in a mixture of poverty, fear but also deep convictions, to fold herself to the new regime and to its rules. With the analysis of the economic indicators we will be able to demonstrate how the power of the State actually grew, instead of decreasing, from 1960 onwards.

trends - by strange, anomalous or excessive that they can be - that have been perceived previously when analyzing the data; Here we will give a reason to the first question: where are we coming from.

Finally, as we have said the analysis of “where are we coming from” must be accompanied by a “where are we supposed to go” that, in this work, is more a: “where should we go”. After analyzing the development of the Spanish economy and the most important causes and consequences that relate us to the some of the most important Spanish anomalies, problems or strangeness, it is essential to draw a kind of roadmap that, without being exhaustive, does try to draw the main lines of what would have to be the essential reformist plan of the Spanish economy for the following decades. In this last part I will give some useful clues as to where the Spanish economy would have to go to ensure its sustainability and correct growth in the coming decades or, otherwise, it is more than likely that Spain will be doomed to a truly unsustainable situation, not only economically, but also socially and politically.

During all the work, which is purely economic, the political perspective is never lost sight of. For this reason, this is perhaps a work much more of Economic Policy than it is of pure Economy. In fact, the concern that inspires this work is both an economic concern, which has to do with the future of the Spanish economy, as a deeply political and social concern, which has to do with the proper sustainability of the Spanish State, but above all of the Spanish Nation, which right now stands alone surrounded by both her external enemies and, more sinisterly, by many of her internal enemies. I hope, then, to respond with this work to some of the main questions that have been raised, that are posed and that will be raised in relation to the economic development of the Spanish economy, past, present and future.

2 OF HOW THE SPANISH ECONOMY EVOLVED IN THE LAST DECADES AND HOW SPAIN ENDED UP IMMERSED IN THE WORST ECONOMIC CRISIS IN DECADES (1960 – 2017)².

In this part, I will carry out a complete and exhaustive analysis of the Spanish economy from 1960 to the present. The analysis will possibly cover the largest period of economic development in the history of Spain, which goes from the Stabilization Plan of 1959 to the present day, passing through political, social and cultural changes - as well as economic - of great depth, a period whose end can probably be fixed in 2007 - 08 with the start of the Great Economic Crisis in Spain and the explosion of the Great Housing and Real Estate Bubble. From then on, the great weaknesses of the Spanish economy and its productive system appear in front of the eyes of everyone and without possibility of ignoring them. The post-crisis period is thus a period of reflection, recovery and understanding of the causes and weaknesses that accumulated over the years and that ended in the Great Crisis. It is certainly a period of understanding the past to try not to repeat it again.

This second part essentially consists of a sober but complete analysis of some of the most important economic indicators, those that allow us perceive fairly objectively the development of the Spanish economy from 1960 to our days. Later, in the third part I will do an account – diagnose, using a medical term – of many of the problems and anomalies present in the Spanish economy and observed throughout this part. Therefore, the sum of the second and third parts allows us to build a comprehensive and understandable economic analysis that will allow in the last part to expose a series of reforms that should let Spain open a new era of prosperity after closing the previous one with the explosion of the Great Bubble, the subsequent Great Crisis and a State and a weakened National Conscience.

As this work is a study of the Spanish economy and its development over the years, I have avoided in this part any comparison with other European economies, an analysis that will appear exceptionally in later sections and for specific issues. For this reason, the next part compares Spain with Spain, its development and transformation over the years, to know the changes suffered by the Spanish economy through the different periods. In the third part, external factors will be taken much more into account to explain the previously accounted development of the Spanish economy and how they have influenced it.

As will be seen in the analysis of the indicators of the Spanish economy, Spain has had a convulsive and somewhat unique development, at least when trying to explain it from the point of view of the neoclassical dynamic general equilibrium models - that is to say: models with a convex production set -, that is, from the standard theory of growth. As other studies very similar to the current one have shown before "Spain is different from what standard theory predicts, but not by much"³. Although on the one hand, we see that economic growth in Spain is not entirely consistent with what standard growth models predict, other studies have shown how "the Spanish growth process can be rationalized by a not so strange dynamic general equilibrium model of technology adoption eleven three, specific, historical and institutional characteristics of Spain are taken into account". For my part, I will not focus on the construction of a growth model that can explain some of the anomalies of the Spanish economy that I will explain below (see the article mentioned in the footnote above), but the important thing is to show the development of the indicators and plot, later, a socio-political-legal narrative that can allow us to better understand

² I follow on a general basis the structure for the analysis of the Spanish economy pursued by Boldrin, Conde-Ruiz and Giménez (2010). Yet, I'm also adding new indicators, as well as updating the analysis until nowadays and in the majority of sections doing a somehow different account.

³ From Boldrin, Conde-Ruiz and Giménez (2010).

the Spanish economy and its own characteristics in order to prepare ourselves to be able to expose the major problems and challenges and the possible answers or solutions that may arise.

Therefore, through the analysis carried out in this first part, I try to:

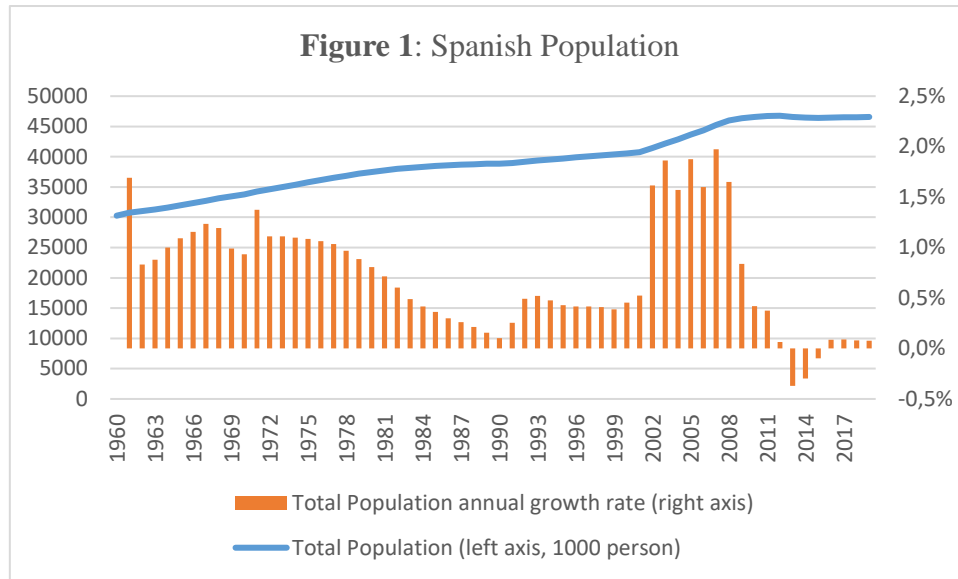
- (1) Present in a sober and objective manner some of the most interesting and important economic indicators that allow us to get a coherent idea of the development of the Spanish economy during the analyzed period.
- (2) Try to describe, through the analysis of these data, what the graphs show us – trends, anomalies, key aspects, etc. – regarding the development of the Spanish economy.

2.1 Population: the forgotten drama

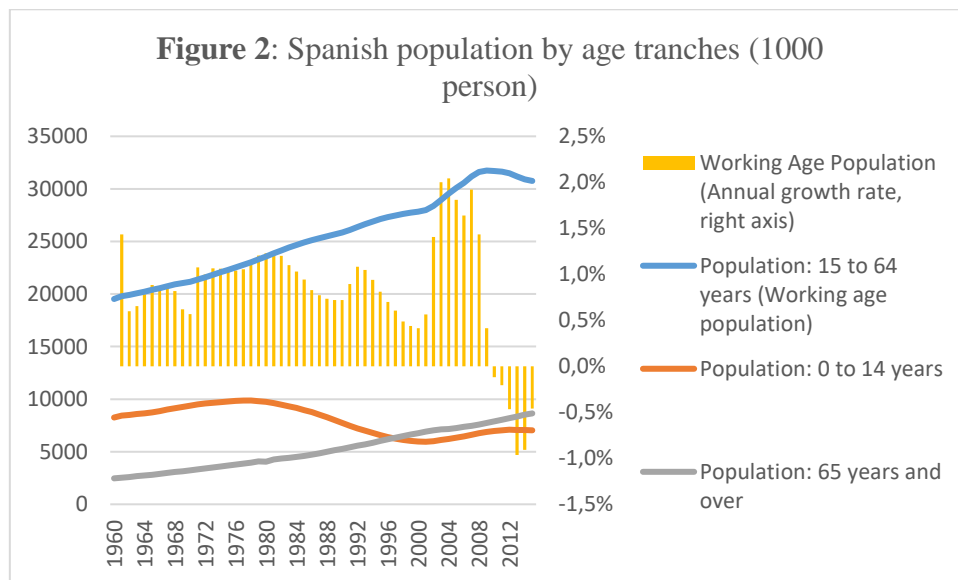
Social and demographic changes have been very important during this period. The Spanish society, which showed a strong demographic impulse and which was relatively young at the beginning of the period, has recorded, since the mid-1970s, very intense declines in the fertility rate (children born/women of childbearing age) and in the birth rate, associated with the retreat of nuptiality and profound changes in family and cultural patterns. Between the mid-70s and the first 2000, the rate of fertility has gone from the value 2.8 to the value 1.1, lower than that required to guarantee generational replacement; the birth rate has fallen from 18.8 per 1,000 to 9.9 per 1,000 in the same period, which has reduced the population growth to the very low rate of 1 per 1,000 in recent years, and this, together with the persistent increase in average life expectancy⁴, has determined a rapid process of aging of the population that must have important political, social and economic consequences. At the same time, the society that, at the beginning of the 70s, was welcoming the return of a considerable part of the strong Spanish emigration registered in the previous fifteen years has later turned to receive, especially in the late 90s and early 2000s, a significant foreign immigration, with very strong growth during the last years⁵. After the crisis, though, Spain has again been a country of emigrants, with a non-negligible part of the working age population – especially young people and immigrants that came after the crisis – leaving the country.

⁴ Spain is the European country with the highest life expectancy and the second highest in the world, after Japan, within the OECD countries (2017 data). 2017 released figures by the OECD have shown the country has more than 100,000 people aged over 100. Average life expectancy in Spain is now 83.2, just 0.2 years lower than Japan's 83.4. See: Portalatín, Beatriz G. España, el país con mayor esperanza de vida de Unión Europea. El Mundo. 24-11-2017. <http://www.elmundo.es/ciencia-y-salud/salud/2017/11/24/5a16dd19268e3e063a8b4658.html> (Accessed 2018-05-23)

⁵ From Rojo, Luis Ángel (2002)



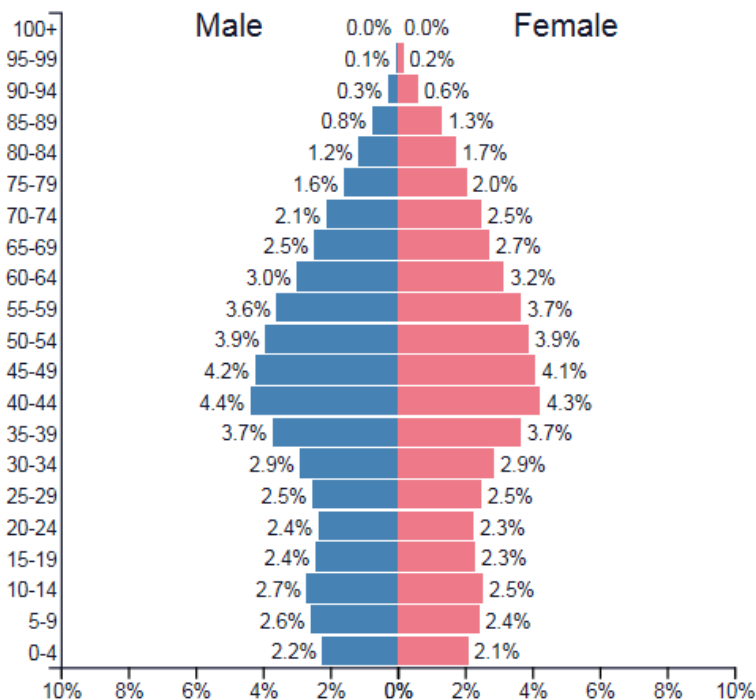
As we can see in the previous figure, the Spanish population has been growing since 1960, constantly but with moderation. We can observe how the relatively high ratios of the 60's - a decade of great expansion of the Spanish economy - have been gradually decreasing since the end of the 70's, coinciding with the transformation of the political Regime. During the decade of the 80's and 90's the growth of the Spanish population is especially low, and this trend only changes in an exaggerated way beginning in the late 90's and continues until the mid-2000s. After the Great Crisis, the trend changes completely, with the Spanish population stagnating and having even negative growth rates due to the important departure of many of the immigrants and part of the Spanish population.



The above figure serves to observe the population changes in its different age groups. The greatest change, as we have been able to point out earlier, has occurred in births, which decrease greatly since the mid 70's and therefore we can see very clearly the decline in the population of Spaniards between 0 and 14 years. In turn, this movement is accompanied by an increase in the population over 65 years old, its turning point being in the mid-1990s, in which the population between 0 and 14 years old is for the first time less than the population over 65, which certainly puts in difficulty the Spanish population sustainability.

In the Figure, we can also perceive a decrease in the rate of growth of the Working Age Population. This reached a peak in the late 80's, largely due to the massive incorporation of women into the work force, after the transformation of the political regime as well as the greater number of women with higher university education. This growth rate is gradually decreasing, until again the exaggerated increase that occurs in the late 90s and early 2000s, when the massive arrival of immigrants make the growth rate of the active population the highest of all the term. This call to immigrants, largely to work in the sector of construction and services - in full swing then - ends abruptly after the economic crisis, when many of them are forced to leave the country due to lack of opportunities. We see that since 2005 the growth rates begin to decrease until they become negative and the working age population, still stagnant, although with prospects for improvement, is decreasing considerably.

Figure 3: Spanish population “pyramid” (2018)



One of the most disturbing signs of population change in Spain comes from observing the Spanish population "pyramid"⁶, no longer a "pyramid", but rather a coffin, perfect metaphor of the situation that Spain faces. The Spanish population pyramid has been reversing for years to the point that, according to the INE, if current demographic trends were maintained, Spain would lose one million inhabitants in the next 15 years and 5.6 million in the next 50 years. The so-called "baby boom" took place in Spain between 1957 and 1977 with the birth of almost 14 million children, and the figure shows how the demographic trend for this age forms a triangle. In 2008 the pyramid changed its shape to that of a diamond, in great part due to the fact that after the "baby boom" there was a sharp decrease in the number of births. Starting from 1991, the base of the pyramid also begins to narrow, in an unstoppable phenomenon that will lead to the total inversion of the triangle in 2050⁷. If this trend was to be maintained, the INE reveals that in the

⁶ Data for the historical evolution of the Spanish “pyramid” extracted from: Population Pyramid. <https://www.populationpyramid.net/spain/2017/> (Accessed 2018-05-23).

⁷ Recently, a study on the subject has been published, warning of the dangers that threaten the Spanish economy if this trend continues: "If fertility in Spain remained the average recorded since 2000 (1.32 children per woman) and there would be no migratory flows with the outside, the volume of young people between 18 and 40 years would be reduced at a rate of 38% per generation, so that, by 2050, there would be 62 young people per 100 today (-38%), 42 in 2075 (-68%), 29 in 2111 (-71%) and 22 within a century (-78%), as explained by the director of the Renaissance Demographic

next fifty years the percentage of the population over 65 years of age, which currently stands at 18.2%, would be 24.9% in 2029 and the 38.7% in 2064. By then, those over 65 will be the main population group. As a consequence, the dependency ratio will be 2 to 1 (currently it is 4 to 1)⁸.

Figure 4: Evolution of the Spanish population “pyramid” (1960 and 1970)

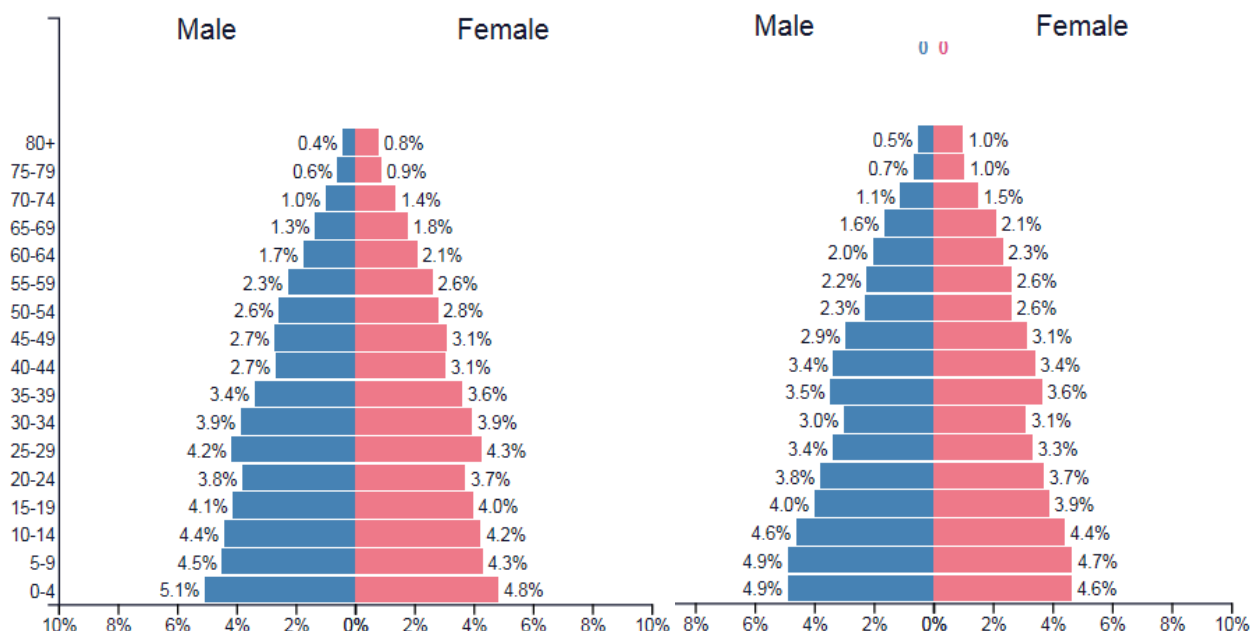
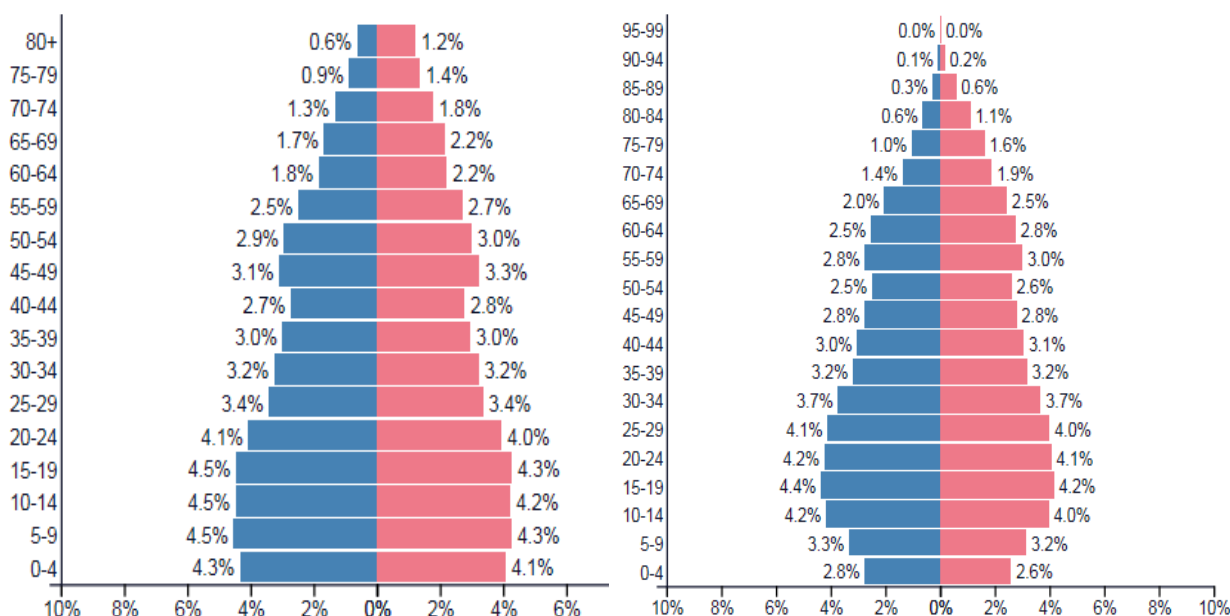


Figure 5: Evolution of the Spanish population “pyramid” (1980 and 1990)



Foundation, Alejandro Macarrón, in the last issue of Papers, published by the FAES Foundation” See: Llamas, Manuel. El declive demográfico o cómo España se quedará sin jóvenes en el próximo siglo. Libertad Digital. 2018-05-18 <https://www.libremercado.com/2018-05-18/el-declive-demografico-o-como-espana-se-quedara-sin-jovenes-en-el-proximo-siglo-1276618856/> (Accessed 2018-05-23).

⁸ The reader can check the interesting and very complete INE study for 2017 on the Spanish population: INE (2017)

Figure 6: Evolution of the Spanish population “pyramid” (2000 and 2010)

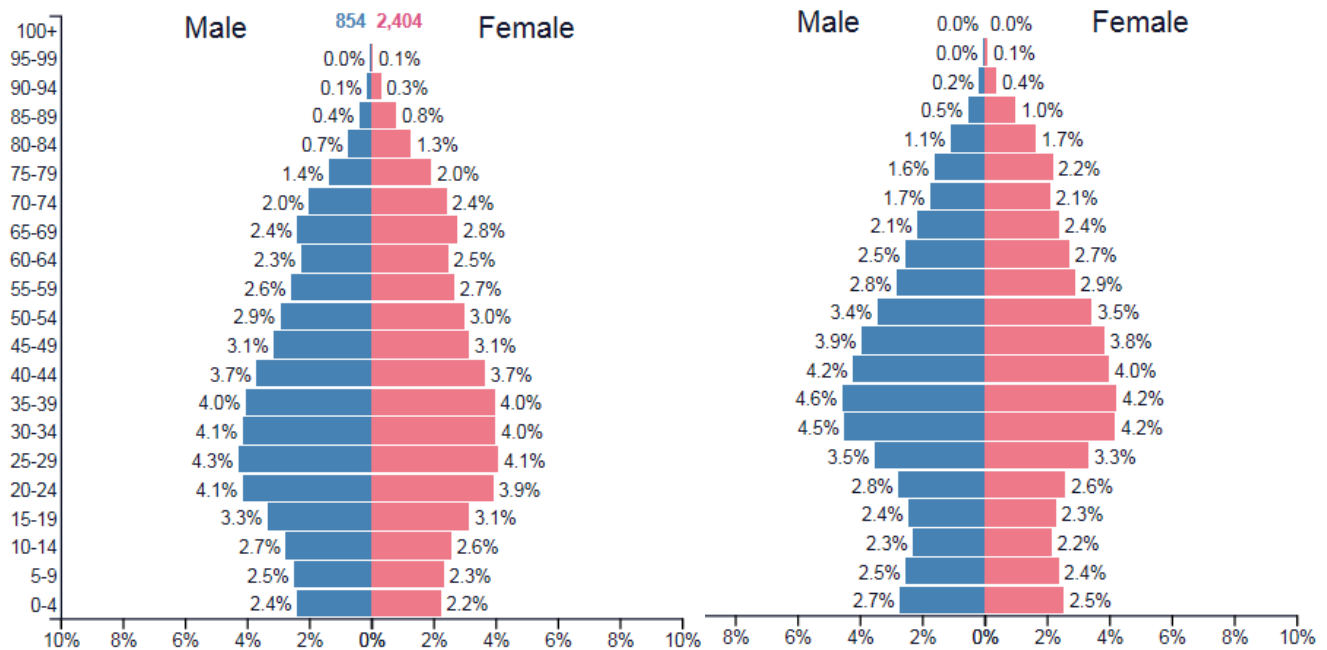
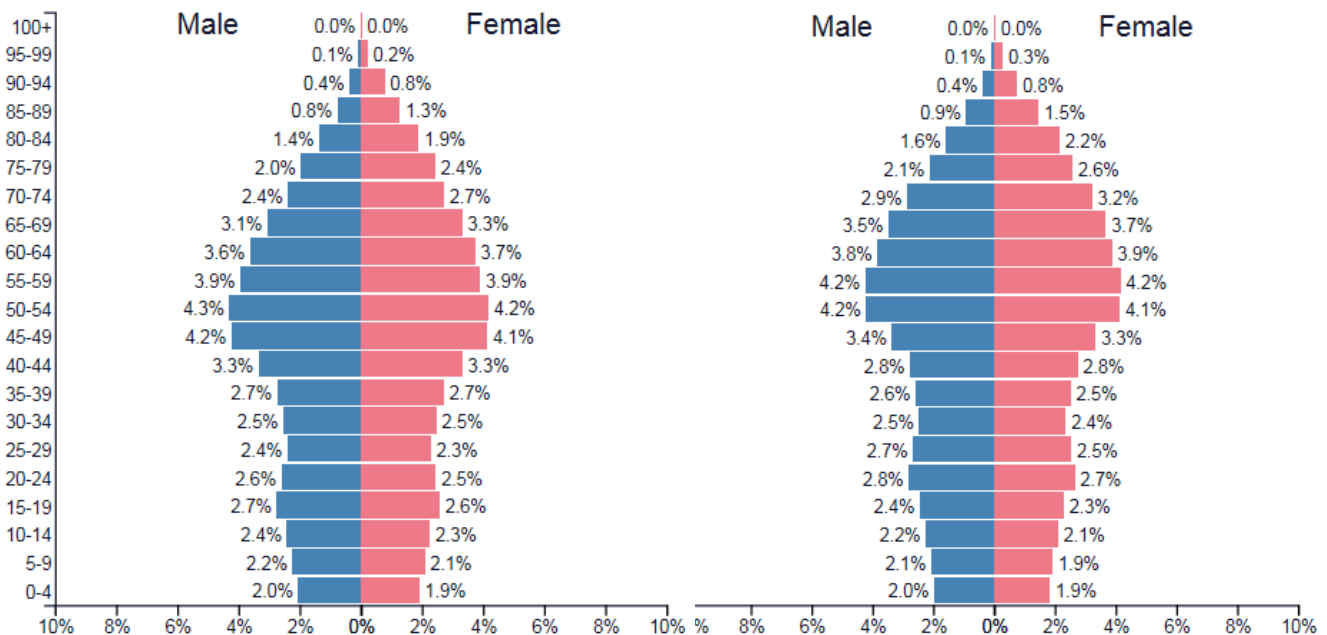


Figure 7: Evolution Forecast of the Spanish population “pyramid” (2025 and 2030)



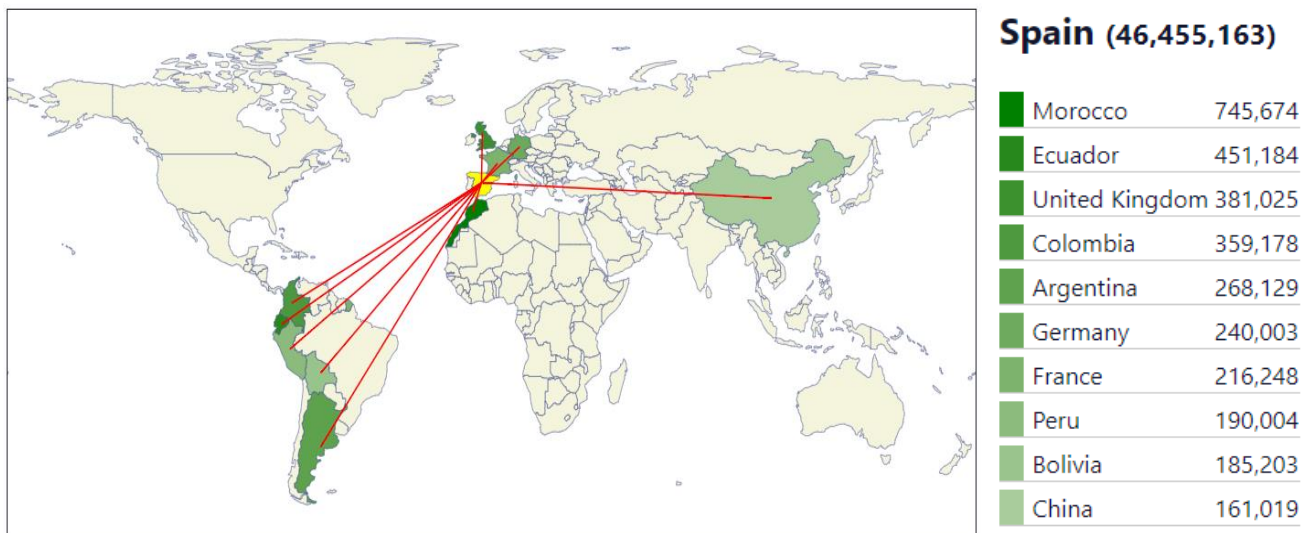
An interesting final graph is the one that shows the origin of immigrants in Spain⁹, due to the importance that the main wave of immigration in the early 2000 had socially and economically for Spain. As we can see in the diagram, Spanish immigration has three places as its main source:

⁹ From: Population Pyramid. Spanish Population Pyramid. <https://www.populationpyramid.net/spain/2017/> (Accessed 2018-05-23).

- (1) Morocco: due to geographical and historical¹⁰ proximity Spain faces many immigrants of this nationality who came to Spain especially in the late 90s and early 2000s to work in the construction sector. After the economic crisis, many stayed in Spain.
- (2) Europe: mainly due to the fact that Spain is a European country with free borders for European citizens, it is normal that many people from France, Germany and the United Kingdom are in Spain. However, most are either skilled workers or retirees who come to spend their last days in Spain. This is especially true in the case of Germans and English who usually stay around the Spanish coast.
- (3) South America: due to cultural, historical and linguistic closeness, many immigrants from South American countries came to Spain to work especially in the construction sector and in the service sector. A not unimportant part of these immigrants traveled back to their countries after the crisis, not finding enough opportunities in Spain.

As we can see, except for a very residual part of South American and European immigration, most of the immigration that Spain received was low-skilled, who were employed mainly in jobs with little added value and with little productivity gains. As we will see later, this fact helps explain the delay in productive growth in Spain during this period compared to neighboring European nations.

Figure 8: Origin of the migrant stock in Spain (2017)

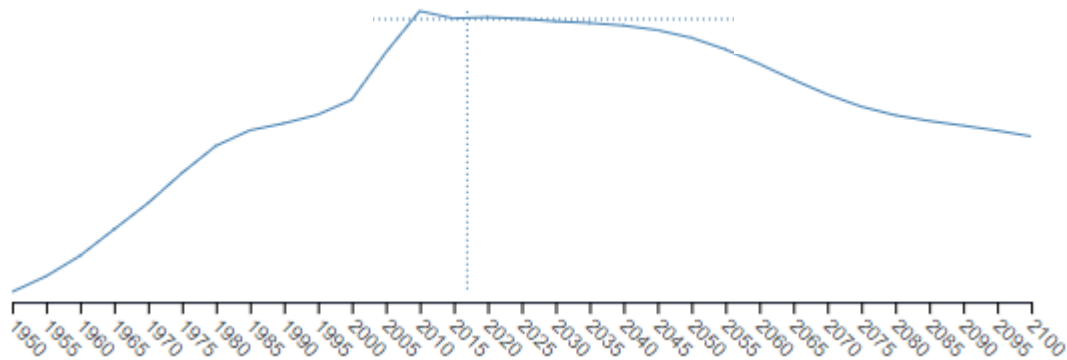


Finally, in this last graph (“Spanish Population Forecast”¹¹) shown below we can see that the tendency of the Spanish population is to decrease dramatically in the coming decades, after a period of stagnation that will last until around 2035.

¹⁰ Spain had, like France, an important presence in Morocco, especially during the first decades of the 20th century, through the Spanish protectorate of Morocco.

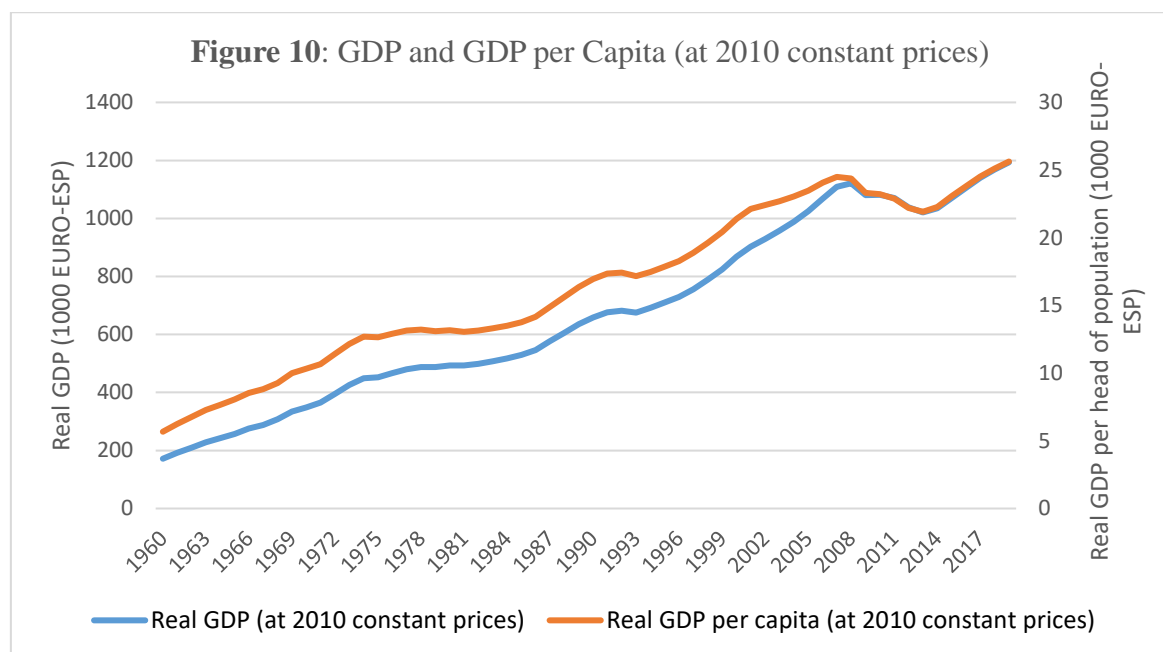
¹¹ Data extracted from: Population Pyramid. <https://www.populationpyramid.net/spain/2017/> (Accessed 2018-05-23).

Figure 9: Spanish Population Forecast (2017)



2.2 Gross Domestic Product: improvement but not without obstacles; three main growth cycles

In this section I will show the evolution of Spanish GDP and other related indicators for the same period (1960 to present). The analysis is done at constant prices of 2010, to better analyze the data in historical series.

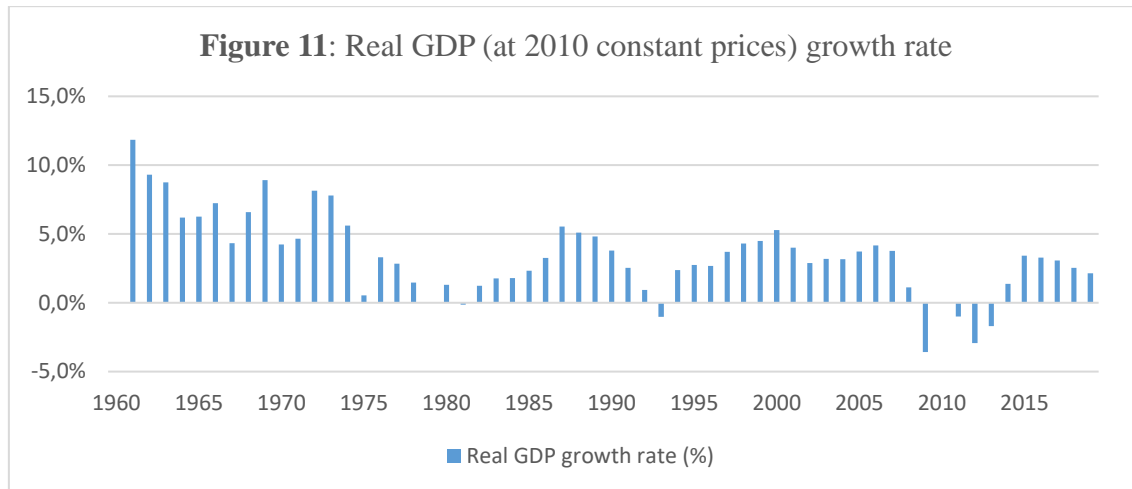


The first conclusion we can draw from looking at the data is that the Spanish economy has grown during these last years at a considerable pace. In the last three decades, aggregate GDP has grown by 128%, which corresponds to an average annual growth rate of 2.4%; GDP per capita grew by 84%, which corresponds to an average growth rate per year of 1.7%¹².

The evolution of GDP per capita has followed - as can be seen in the graph - a very similar evolution. As will be seen later in the analysis of the following graph, both GDP and GDP per capita follow three similar cycles of expansion, with a sharp decline after the Great Crisis in 2008. It is interesting to note that, as mentioned before, the Spanish population grew relatively little in

¹² Very close to Ed Prescott's magical 2% growth rate. In relation to the USA, Prescott said that: "From 1890 to the present day, the growth of the United States has been 2% per inhabitant; this trend, which can be considered natural or spontaneous, reflects the steady progress of the economic efficiency that has taken place in the leading country": Sorman (2009).

the last thirty years (from 39 million went to 45 million) which indicates that the growth rate of income per capita has been about 1.5% lower than the aggregate growth rate.



This new figure, in which the annual growth rates of Real GDP are represented, is especially exemplary of some of the particular dynamics of the Spanish economy in relation to economic growth. The Gross Domestic Product (GDP) of the Spanish economy has increased, in real terms, by 89% between 1975 and the 2000s; and the proportion of Spanish GDP per capita with respect to the corresponding average value of the countries of the European Union, in terms of purchasing power, has gone from 79 per 100 at the beginning of the 70's to 83 per 100 by the end of the 90's¹³. However, the advance of the product in these years has had to break through the conjectural oscillations of remarkable intensity. After a decade of enormous economic growth during the 60s, inaugurated by the Stabilization Plan of 1959 - and which I will talk about later -, with growth rates above 5% and almost reaching 10% some years - not far of the growth rates of the Chinese economy in its period of maximum expansion -, after the transformation of the political regime at the end of the 70s and after this first cycle of great economic growth, unique in its length, we can perceive two other clear growth cycles, with their respective crises and subsequent stagnation.

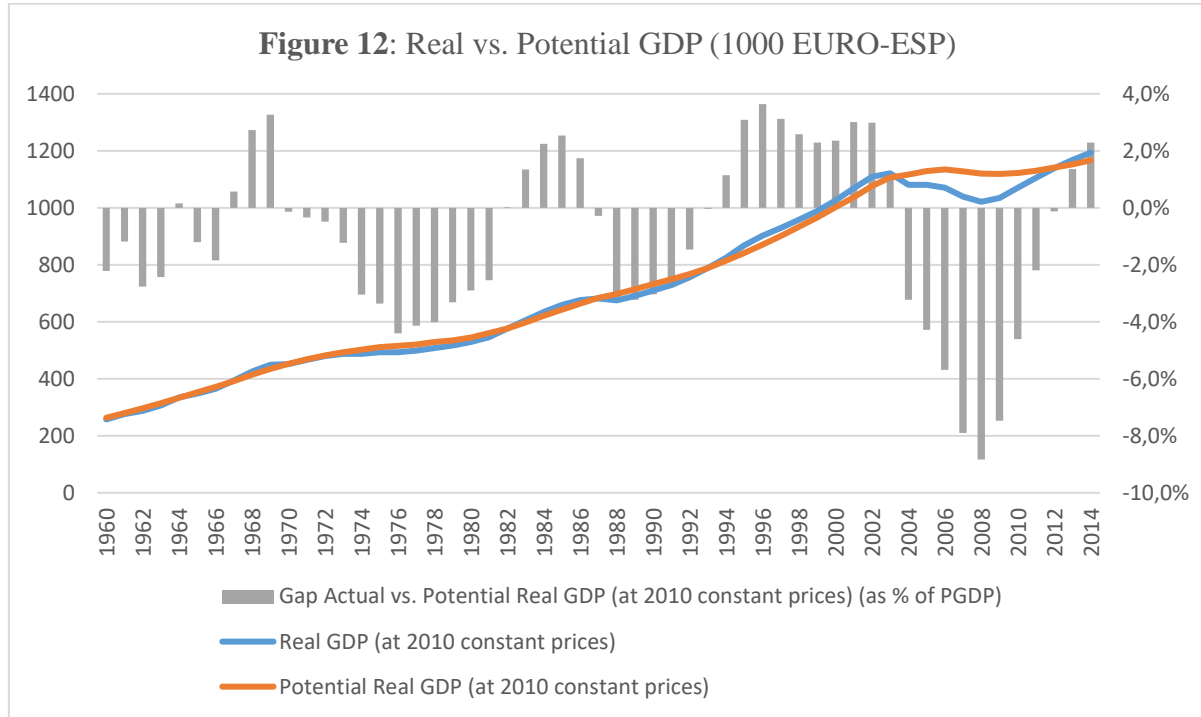
Therefore, we can differentiate in this period three different growth cycles in the economy, all of similar length (around 15 years):

- The first cycle, which is also the longest and most powerful of all the expansions of the Spanish economy in the analyzed decades, was inaugurated with the Stabilization Plan of 1959 and ends coinciding with the last years of the Franco regime and the oil crisis in 1973 - 75. This period gives way to a turbulent decade in the economy, as well as in politics and socially, being of strong stagnation of the Spanish economy (1975 - 1982) and lasting until the arrival of the second cycle of growth, which was not as intense as the first one.
- The second cycle goes from the beginning of the 80s - and roughly coinciding with the entry of Spain into the European Union in 1985 - until the early 90's; it peaks around 1989 - 1990 and afterwards it suffers the consequent deceleration, ending abruptly in 1993, being the period 1992 - 1994 of great weakness in the Spanish economy.
- The third cycle extends from 1995 to the Great Economic Crisis in 2007-08, ending even more abruptly than the previous one.

It is interesting to see how the Spanish economy in the last decades has experienced similar crises every 15 years - although the 1980s crisis was not of the magnitude of the one

¹³ From Rojo, Luis Ángel (2002).

happening in 2008 with the Great Explosion of the Real Estate Bubble, even if the unemployment rate was similar in both periods - which is usually the duration of the expansion process of the Spanish economy. Therefore, and as I pointed out before, two complete cycles in just 30 years and each of which of approximately 15 years are not something that can be easily explained according to a theory of the standard economic cycle. At least, this is not the frequency at which the analysis of business cycles is carried out¹⁴. Therefore, Spain and its growth model is in a certain way "special" and in the following sections and parts I will try to expose some of the concrete causes that explain this characteristic behavior of the Spanish economy.

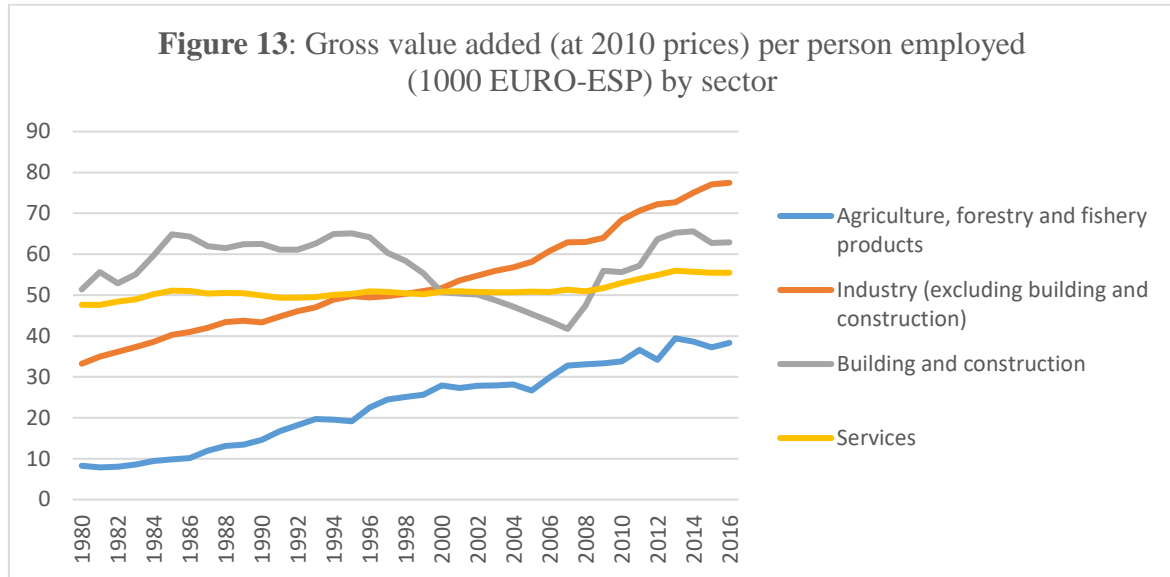


From this graph where I compare Real GDP growth and potential GDP growth, as well as the gap between them, we can draw some interesting conclusions as well. First of all, we can see how during periods of expansion Spanish Real GDP has tended to grow more than potential GDP; conversely, we see that in periods of crisis Real GDP has tended to fall much more than potential GDP and more than what it actually grew above potential during the expansion; so negative shocks tend to affect RGDP more than positive ones do. We also observe how the decade 1973 to 1982 is a decade of strong stagnation of the Spanish economy, with the Real GDP growing below the potential, to which the upheaval created by the death of Franco and the resulting political instability contributed, as well as the end of the period of expansion that occurred in the 60s in most of the great western economies, a period that ends abruptly with the oil crisis in 1973. End of the 90s and the beginning of the 2000s are years of overheating for the Spanish economy - Real GDP growing more than the potential - and all this due to the disproportionate growth of the real estate bubble, although there are already signs of weakness before the crisis finally erupts in 2008. After the Great Crisis and the Great Explosion of the bubble, Spain enters a period of great economic crisis: Real GDP plunging well below the potential and only recovering almost 10 years after Real GDP began to show signs of weakness. The crisis, of enormous and lasting consequences¹⁵, has even reduced Potential GDP, to then stagnate it, which clearly shows the

¹⁴ To consult a modified economic model that can explain the behavior of the Spanish economy, see the following study, on which I rely for the analysis of the indicators in this first part: Boldrin, Conde-Ruiz and Giménez (2010).

¹⁵ "At this point, beginning 2012, it is obvious that we are not facing a simple recession -the fall of GDP in two consecutive quarters- or a crisis of greater or lesser severity, but rather an authentic third Great Depression", as it has been very well indicated by Professor Maluquer de los Motes: Maluquer de Motes, Jordi. España en el país de las

severity of the crisis. Due to this stagnation of potential GDP, Real GDP has surpassed Potential GDP in the last two years, even if Real GDP still remains below the Potential GDP trend existing before the economic crisis.

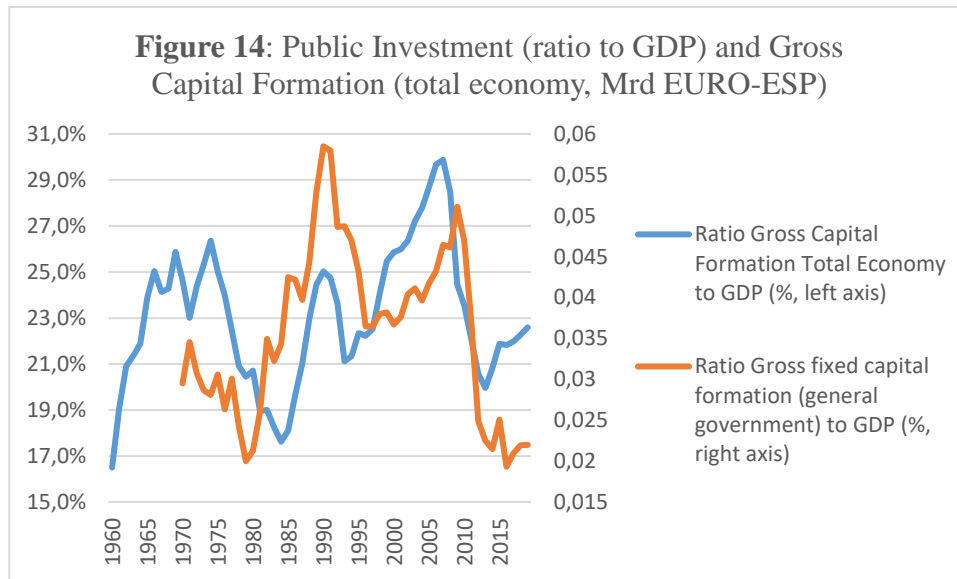


This graph is interesting to see the Gross Value Added per person employed in Spain in four of the most important sectors. Some conclusions can be drawn from observing the trend:

- Regarding agriculture, Spain has known a great revolution in this sector in the last decades. From being an eminently rural country in the 50s - although with little mechanization and low productivity - it has gone on to have a highly competitive agricultural sector - especially in Europe - and technological innovations have been widely embraced in the Spanish countryside, which has meant an increase in production despite having fewer and diminishing amounts of people employed in the field.
- The industry is another sector where the Gross value added per employed person has grown. This has been a mixture of two factors: (a) A significant decrease in the number of people employed in industry over the years; and (b) an obvious increase in productivity due to the modernization of the sector and the losses of the less competitive areas. Nowadays, the industrial sector has decreased in Spain enormously compared to what existed in the 60s – as it will be explained more extensively in the following parts of this work - and due to the enormous external competitiveness, only a small industry has remained in Spain, being competitive enough as to not disappear.
- The trend of the services sector has remained especially constant, as the people employed in the sector and the Gross value added of the sector have grown in parallel.
- Regarding construction, it can be clearly seen the increase that occurs since the mid-80s when the real estate bubble begins; the sector will reach its climax in the first 2000. We also see how, since the mid-2000s, a slowdown in the sector occurs until arriving into the crisis. It is interesting to see how the sector has been recovering in recent years, even though it is currently stagnant.

Finally, it is worth noting some of the components that make up the Spanish GDP, even if its tendency does not add much information to what has already been said in the GDP analysis. Of all the GDP components, consumption is the first one. As well as we saw when analyzing GDP, with regards to consumption we can also find two growth cycles - as predicted by economic

theory - although less pronounced than those seen in relation to GDP. Government consumption grows in this period remarkably faster than private consumption and it is also quite pro-cyclical, unlike what it is sometimes prescribed; that's to say: a counter-cyclical policy, which has certainly not happened in Spain. Investment also fluctuates more than GDP.



2.3 Expenditure: following the same cycles

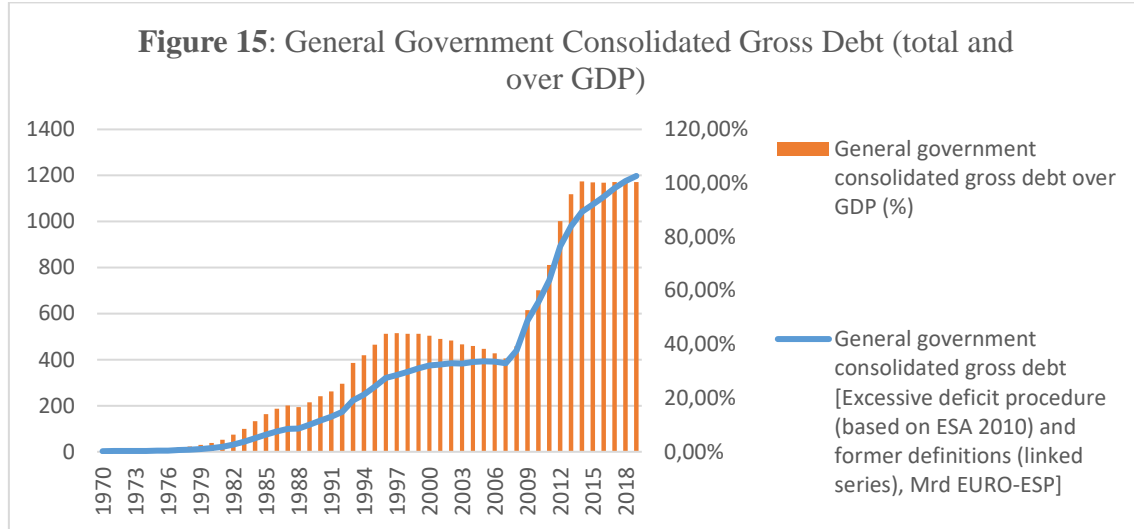
2.3.1 *Government expenditure, Public Deficit and Public Debt*

The history of Spanish public accounts is generally that of a deficit of increasing importance which began in the 70s, even if, as with GDP, there have been sub-cycles of diverse entity with apparent improvement but rarely with overtones of sustainability; rather the improvements have been due to conjectural factors incardinated in the Great Real Estate Bubble that begins, as already said, in the middle of the 80 with the help of the money coming from the entrance of Spain in the European Community¹⁶. Thus, Spain has certainly a chronic problem of financing herself, having to resort constantly to foreign saving, and this is one of the causes of the external economic dependence of Spain over these years. In fact, it was this need for financing that in a certain way forced the Franco regime to gradually open up the economy and liberalize it during the late 50's.

Also, as it will be seen more extensively in other sections of this paper, this savings deficit in Spain has not always been the result of imperative needs arising from industrialization and the growth of the services sector, but, especially in recent years, has been the result of the misallocation of resources due to the existence of distortions in the incentives. At least for much of the past 30 years, much of the resources that Spain has received, have been buried in the real estate sector, which has been the great cause of the Spanish "savings hole", a fact that worsened after 2008 after the collapse of the exceptional income that the Great Real Estate Bubble reported

¹⁶ In fact, Professor Maluquer argues that Spain has lived a millennium in perpetual external deficit, a hole that has been covered in different ways depending on the time. For example, during the Reconquista (722 - 1492) it was financed with the tributes obtained from the Muslim Kingdoms; in time of the Great Catholic Monarchy and the Spanish Empire (1492 - 1800) could be financed thanks to the important metallic flow brought from the American lands; finally, more recently, the Spanish economy has been financed through credit and debt when it has been possible (in recent decades, for example), or with poverty and growth when it has not been possible (1936 - 1959). See: Álvarez (2016)

to the public coffers, while the expenditure was structuralized without apparent remedy. In addition, it should be noted that Spain is possibly the only major European country - perhaps only surpassed by Italy – which didn't experience any nominal growth during the seven-year period following the Great Crisis, which has greatly aggravated the budgetary tensions coming from the country's past and its huge inertia for spending.



Regarding the evolution of Spanish debt¹⁷ it can be observed how, starting with the Transformation of the Political Regime in Spain in 1978, it increases considerably and almost without pause. Debt only knows a period of reduction during the years of the Great Bubble, where tax revenues increased and, together with a conservative government policy regarding debt, Spain managed to reduce its debt enormously (debt was reduced by half in fifteen years). Starting from the crisis and different events derived from it (the E Plan of public investment, the rescue of the financial system, the fall in tax revenues, the increase of unemployment expense items, etc.) debt increases to levels not seen, at least, in the last half century¹⁸; coming from a minimum of around 40% of GDP, debt reaches a maximum of 100%, a worrying figure for a country like Spain with large financing needs. In fact, from 2008 to 2014, public liabilities but also assets have increased significantly, so that the net composition of the public sector goes from -216,774 M€ to -602,226 M€. But in terms of unconsolidated liabilities the figures are much worse, going from 414,756 M€ to 1,142,342 M€¹⁹. The loans items includes an increase of 234,000 M € on the asset side versus one of 169,000 M € on the liability side.

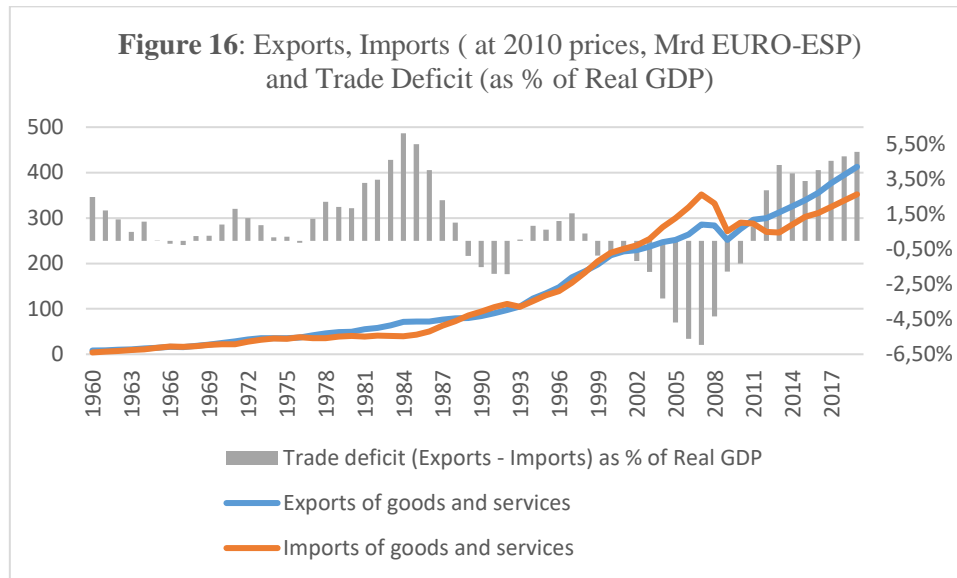
¹⁷ The final distribution of the Spanish debt is not known in terms of the foreign part, or at least not at all, but as of December 2014 there is a fairly revealing picture that allows to see something. In Álvarez (2016) and with data from the Bank of Spain, the foreign tranche is reconstructed with data from 2012 assuming that there have not been huge movements in these masses of securities, whose owners are, as in Spain, French insurers for the most part and British and American pension funds. The foreign exposure to the securitized Spanish debt, amounting to about 35,000 M € at the end of 2014, can be approximately: 43% in French hands, 18% in English hands, 8% in US hands; 7% in German hands and 6% in Asian hands.

¹⁸ The evolution of the Spanish debt in the last 100 years can be consulted in: Cinco Días. https://cincodias.elpais.com/cincodias/2014/12/12/graficos/1418410740_043679.html (Accessed 2018-05-23). It can be seen how we are currently at the highest levels of debt in a century, and we have to go back to the beginning of the 20th century and after the Cuban debacle to find similar levels of debt over GDP. It can also be seen how the period 1945-1975 is a period of great stability and decline in the Spanish public debt, especially after the powerful increase that led to the Spanish Civil War, which brought ruin to the Spanish public coffers, and more than literal "By the end of the Spanish Civil War, NKVD (soviet intelligence) general and diplomat Alexander Orlov abandoned to the Western side. Later on I have published a book called The Secret History of Stalin's Crimes, in which I describe what is most likely to be the greatest larceny in History [...]: the delivery of the Spanish gold to the Soviet Union" Angel Viñas, "Gold, the Soviet Union and the Spanish Civil War," in ed. Martin Blinkhorn (London: Sage, 1986), 224-43.

¹⁹ Referred to the closing of 2008 against 09/30/2014, according to the Bank of Spain data series. See reference in Álvarez (2016)

2.3.2 External sector

It is also important and interesting for the analysis of the development of the Spanish economy to take a look at the external sector, as well as to see how the Spanish economy has gradually opened up, from being a hermetic economy after the Civil War (1936 - 1939) to become a highly open economy and, as we said before, dependent on the outside²⁰. For this, we should take a look at imports and exports, and the trade deficit.



Again, we can observe two long cycles with, again, an important inflection around 2001 and with the subsequent excessive growth of imports during the bubble and cheap money period, lasting until the financial crisis of 2008²¹. This leads to a sharp deterioration in the current account during the 2001-2008 period, which has a lot to do with the increase in energy imports - in volume and price - and with the growing current account deficit with Asia, and not so much with the relative position against Germany²². As we have already indicated, it is the real estate bubble with its uncontrolled access to financing that triggers the Spanish trade deficit, given that the income elasticity of Spanish imports is very high²³. With strong growth in employment and real wages, imports of consumer goods also shot up²⁴.

²⁰ Spain has an openness ratio, $(X + M) = \text{GNP}$, of 0.7, which is bigger than that of Great Britain, France, or Italy, according to: Boldrin, Conde-Ruiz and Giménez (2010).

²¹ Spain since 1960 - and possibly before, although the statistical series are not homogeneous in the past - maintains a constant deficit in the trade balance that is partially compensated by a surplus in services, with a difference in terms of income and transfers. Only exceptional periods (First World War, Real Estate Bubble, etc.) have given rise to a surplus of importance during a sustained period, and once all the limits have been exceeded in relation to foreign debt will be necessary to restore the current account balance.

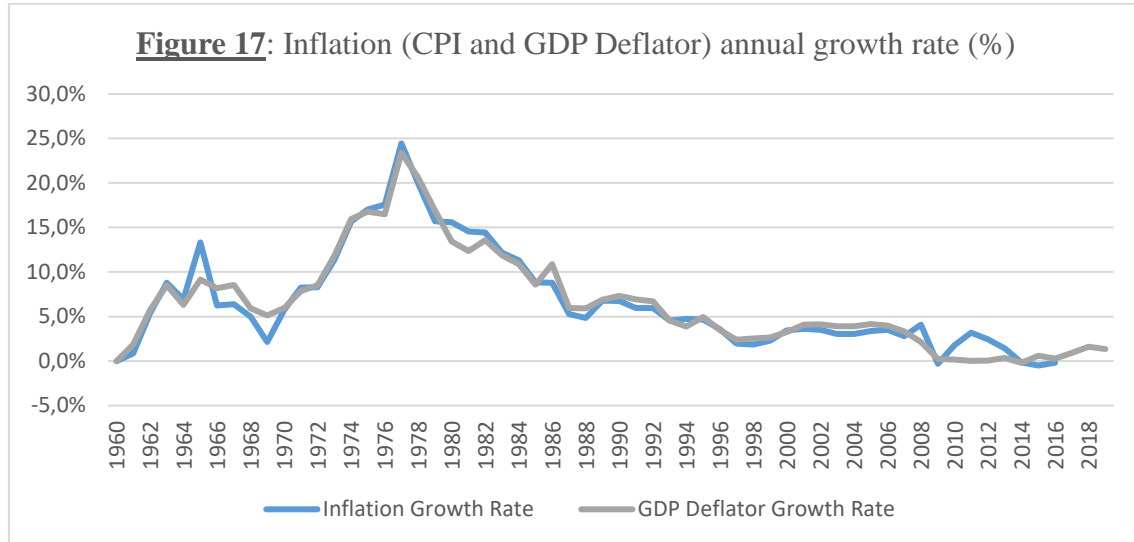
²² From Álvarez (2016).

²³ Highlighting domestic consumption and travels abroad, which strongly deteriorated the balance of services during the golden years of the bubble.

²⁴ “The debate about the euro revolves many times around the pernicious influence it has had in increasing this process regarding foreign trade in Spain and in other European countries. In the absence of the euro, external imbalances were temporarily corrected with some ease by resorting to devaluations. However, these devaluations also have contraindications that cannot be ignored in the case of Spain: its effect is quickly diluted. The devaluation of 1977 lasted less than two years, and those of 1992, although of more lasting effect, were diluted in 5 years, and with only a maximum improvement of 3.5 points of GDP that is deteriorating as the effective rate is revalued, a devaluation right now could have the contraindicative that instead of helping to increase consumption in Spanish product, this one had to compete with the Chinese product and that there was an important replacement component. For a country like Spain, a major importer of energy, these devaluations may not be much in terms of competitiveness” Álvarez (2016).

2.4 Inflation and monetary policy

It is important now to briefly analyze the development of prices and Spanish monetary policy during the period of analysis, in order to draw interesting conclusions that allow us to better observe the behavior and development of the Spanish economy.



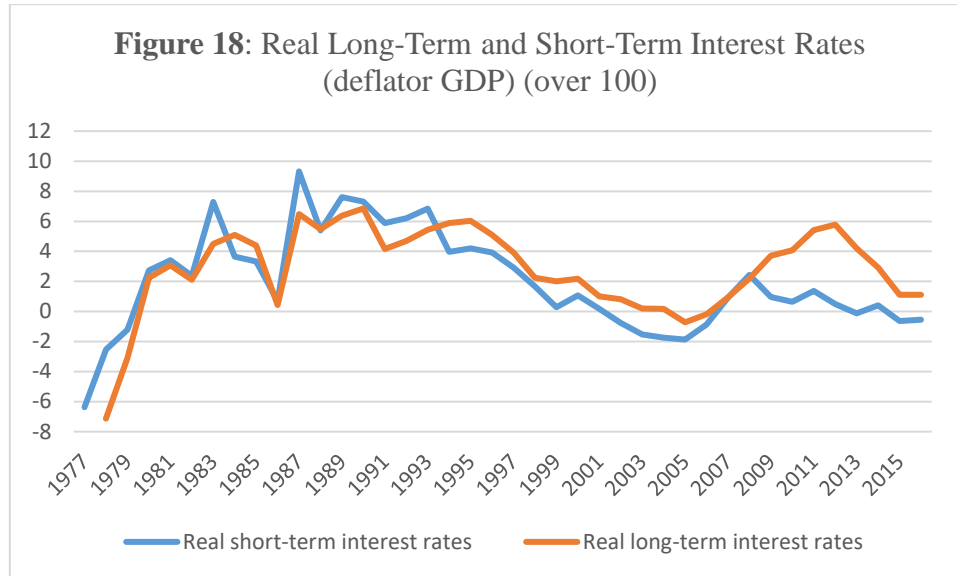
After the Stabilization Plan of 1959, inflation and prices in Spain remained stable in general, despite some upturns in some years. However, it can be seen how, much like other Western countries, inflation has grown enormously since the early 1970s, until reaching a peak at the end of that decade. The serious impacts caused by the energy crisis of 1973-1974 surprised Spain. This considerable increase in inflation has different causes. The inflows of capital induced by the international monetary shocks of the early 1970s had encouraged the monetary expansion and price tensions of the Spanish economy, which had entered the decade with an inflation rate, measured by the consumer price index (CPI), close to 8 percent. These tensions were exacerbated by the direct and indirect effects of higher oil prices on domestic prices and by the reactions of workers who tried to maintain or even increase their real wages in order to offset the rise in prices. Thus, the higher costs of energy and the very rapid increase in labor costs - the increase in salaries added to the effect of high and increasing Social Security contributions - led to an acceleration in the rate of inflation that, measured by the CPI, reached 16.9% in 1975 and reached the maximum level of 24.6% in 1977, year of the first democratic general elections²⁵.

Macroeconomic policies could do little or nothing, until 1977, to moderate the imbalances generated. In the field of monetary policy, the Bank of Spain had begun, in 1973-1974, a set of reforms aimed at regaining active control of the system's liquidity through market mechanisms - control previously impossible with the few instruments available at the time that the peseta was incorporated into the exchange rate of currency flotation in 1974. The Bank of Spain adopted a monetary policy scheme that aimed to affect the aggregate demand for goods and services through the regulation of the rate of growth of the amount of money and that it was proposed to adapt the evolution of the latter to a target rate acting on the cash assets of the banking system through liquid injection or detraction operations instrumented in the interbank market. The new scheme was promising, but its proper functioning - the proper transmission of the monetary policy tonic to the economy as a whole - required a progressive liberalization of the banking system; and the last years of the Dictatorship and the first years of the transition to democracy were not favorable for the introduction of important changes in the financial system, nor were they to propose to the

²⁵ From Rojo, Luis Ángel (2002).

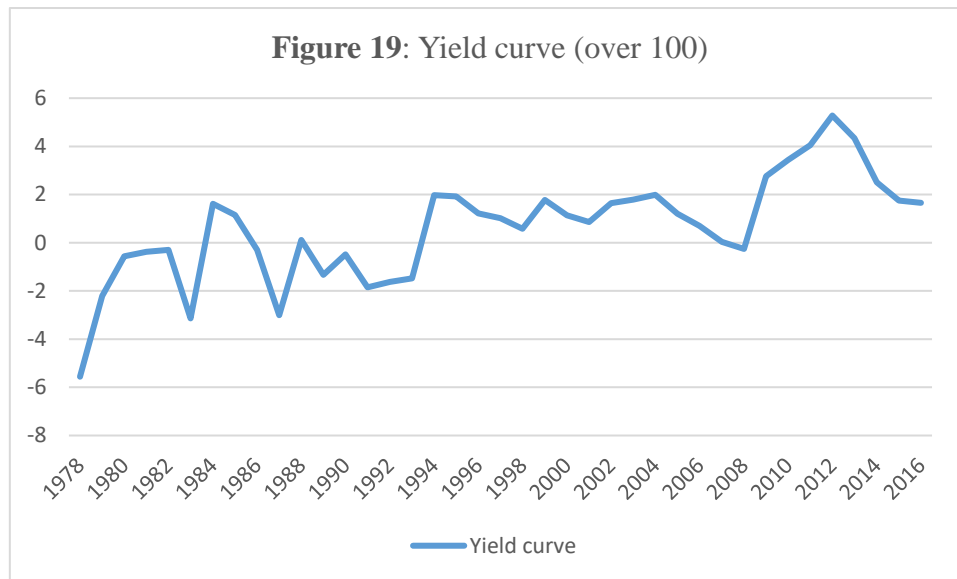
new monetary mechanisms ambitious objectives aimed at stopping the process of dominant inflation. Monetary policy would have to wait for the first democratic government to come out of the polls to begin the development of an active role in the economy.

Afterwards, in the 1980s, a normalization of both inflation and real long and short interest rates was achieved (see graph below). This trend was also greatly influenced by the entry of Spain into the European Union and by its greater convergence with other European economies.



The slope of the yield curve is one of the most powerful predictors of future economic growth, inflation, and recessions and it is widely used as an economic indicator and predictor. An inverted yield curve is often a harbinger of recession. A positively sloped yield curve is often a harbinger of inflationary growth²⁶. In the graph we can see effectively how, depending on the form of the yield curve, we were facing periods of growth or recession. We currently see a flat yield curve but in the process of recovery, which may be showing an improvement in the economy. It is interesting to see how, starting in 2002, signs of a possible recession are beginning to be glimpsed.

²⁶ “Work by Arturo Estrella and Tobias Adrian has established the predictive power of an inverted yield curve to signal a recession. Their models show that when the difference between short-term interest rates (they use 3-month T-bills) and long-term interest rates (10-year Treasury bonds) at the end of a federal reserve tightening cycle is negative or less than 93 basis points positive that a rise in unemployment usually occurs” (Arturo Estrella and Tobias Adrian, FRB of New York Staff Report No. 397, 2009) □ The Yield Curve. Wikipedia https://en.wikipedia.org/wiki/Yield_curve#cite_note-9 (Accessed 2018-05-23).



Real wages in Spain have followed a trend similar to that of many other Western countries in recent decades: a progressive and steady decline, with the exception of some periods, as has been especially the Great Real Estate Bubble. Since the crisis broke out and until 2015, the real salary in Spain has fallen by a quarter, while in the United States and Germany it has risen by 5% and in the United Kingdom it has fallen by 7.5%. The European statistics office Eurostat recalls that, in just eight years, the annual salary of the average Spaniard has dropped by 2,000 euros. In subsequent sections I will explain more thoroughly why wages in Spain are especially low in comparison with other countries and which their constant decline is over time. Here we can simply indicate that as an important indicator of the increase or decrease of inflation, these have followed, like inflation, a downward trend all these last years.



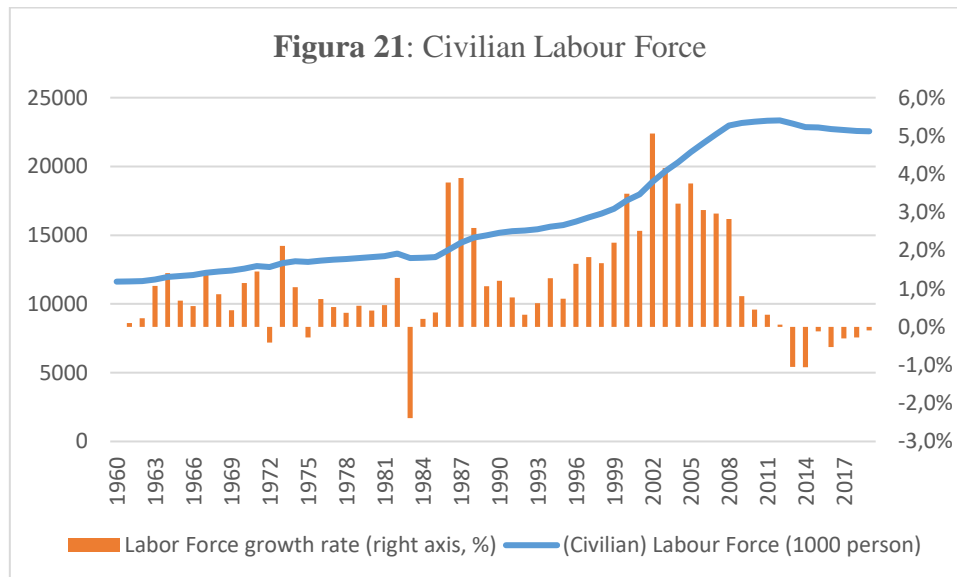
2.5 Production: the keys to the Spanish economy

2.5.1 *Labour Force and Employment*

The total Spanish population was approaching, with declining vegetative growth rates although helped by increasing rates of immigration entering the country, to 40 million inhabitants by the year 2000, being currently 46.5 million, as we have shown the evolution before. The working-age population - that is, aged between 16 and 64 years - has grown at a faster pace than the total population during the period; the activity rate of this population, after registering a setback since the mid-seventies, in the long period of low economic activity, began a recovery at the end of the following decade until reaching the level of 65%, compared to the initial 59%; consequently, the active population - which is the result of applying the activity rate to the working-age population - has gone from 43% to 45% of the total population between the mid-70s and the beginning of the new millennium²⁷.

It must be noted that the increase registered in the global activity rate is due to the increase in the activity rate of women, which has gone from 33% in the mid-70s, to the still low, in terms of European comparison, 51% in the late 90s. This increase is also closely related with the patterns associated with the decrease in the fertility rate and with the improvement in the level of studies of women. In the meantime, the male activity rate, initially at 85% (mid-70s), fell sharply since then and until the late 1980s, reflecting the weakness of the labor market, and has not recovered afterwards, remaining at a roughly stable 78%²⁸.

Simultaneously, the Spanish population has considerably improved its level of academic qualification due to the extension and prolongation of the educational process. Besides, the percentage of women incorporated into the labor force with a level of qualification starting from secondary education has also risen, being at the end of the 90s and the beginning of the 2000s, 52%, compared to 41% for men²⁹.



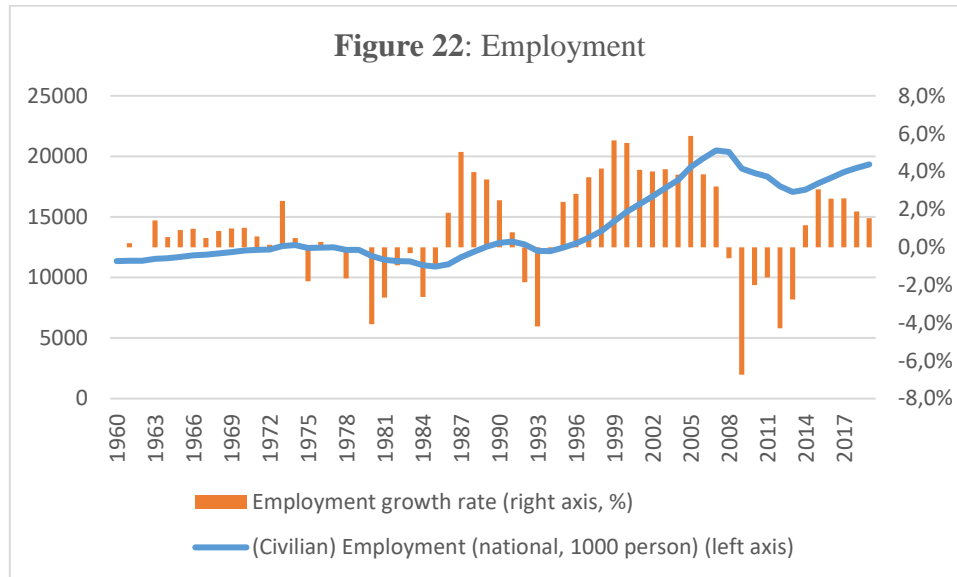
One of the most distinctive aspects of the development of the Spanish economy with respect to any other EU country during the last four decades is the anomalous variation of the

²⁷ From Rojo, Luis Ángel (2002).

²⁸ From Rojo, Luis Ángel (2002).

²⁹ From Rojo, Luis Ángel (2002).

active population, which, being one of the lowest in relation to the total, has become higher than those of France and Italy - which are between 41 and 45%³⁰ -, reaching 50% of the total, and also experiencing an incredibly strong growth between 1995 and 2005. This intense pressure on the labor market is one of the key explanatory factors of the high rate of structural unemployment - in turn highly related to an inequality somewhat higher than the European average -, and which has increased strongly lately after the Crisis. This increase also had, as will be seen later, strong impacts on labor productivity in Spain during this time, remaining lower than in surrounding countries.



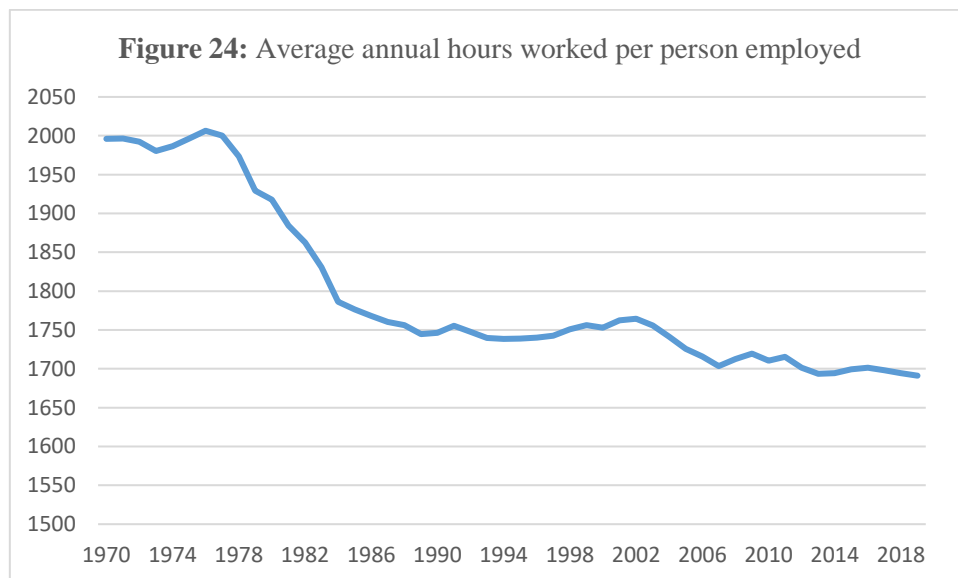
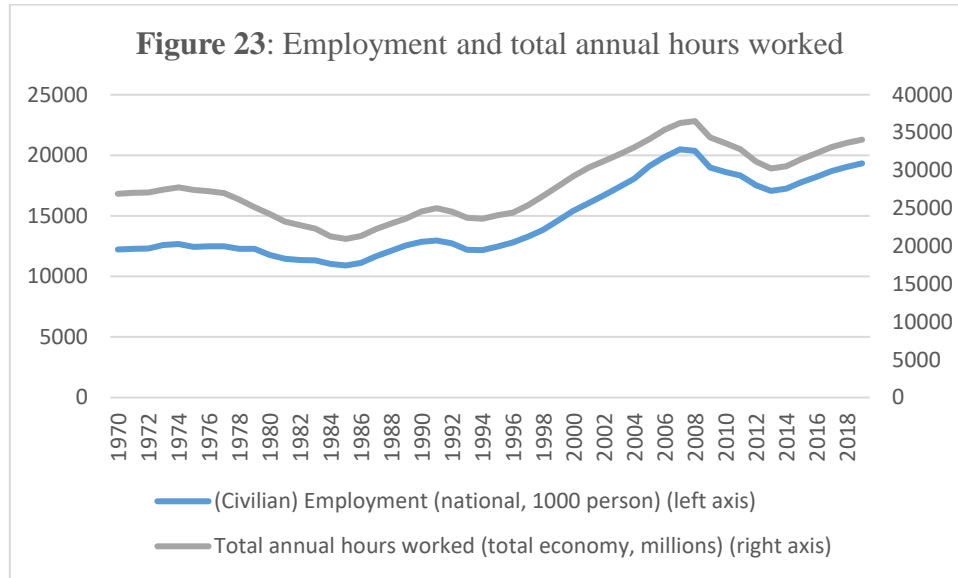
If we look at the aggregate numbers of employment we can still two cycles starting from the transformation of the political Regime - without counting the great cycle of expansion in the 60s - although less similar to each other than previously seen in the output and demand data. If we add the first cycle of expansion during the 60's, we have the following three cycles:

- The first cycle (1960 - 1973): an expansive and extended cycle that went throughout the 60s, with continuous employment growth and extremely powerful GDP growth rates. This cycle of expansion is in line with the improvements introduced in the economy, both in terms of liberalization and openness, especially since 1959, and also follows the expansive cycle of output and demand. As happened with GDP and demand, after 1973 follows a decade of stagnation, with employment in a slight but continuous decline, until its recovery during the next cycle.
- During the second expansion (approximately from 1985 to 1993) employment grew and recovered, although not much: around 1.2 million workers in absolute terms during the period and up to its peak around 1992, which corresponds to 10% of the initial value of employment. From 1991 - 92 there is a deceleration in employment and it will only start to grow again and disproportionately in the next cycle, which was especially keen to employment growth.
- In this last growth cycle (1996 - 2006), employment grows very powerfully in Spain, much more than in the previous cycles, both in a relative and absolute way: around 8 million workers are added to employment lists, which is equivalent to a 66%. Undoubtedly, this great expansion is closely related to the Great Expansion of the Real Estate Bubble, which increased employment very strongly in the construction, services and other related sectors. After the Great Crisis of 2008 we see a significant decrease in

³⁰ From Álvarez (2016).

employment. After that, it only seems to start to recover as of 2014, probably helped by the liberalizing labor reform of 2012.

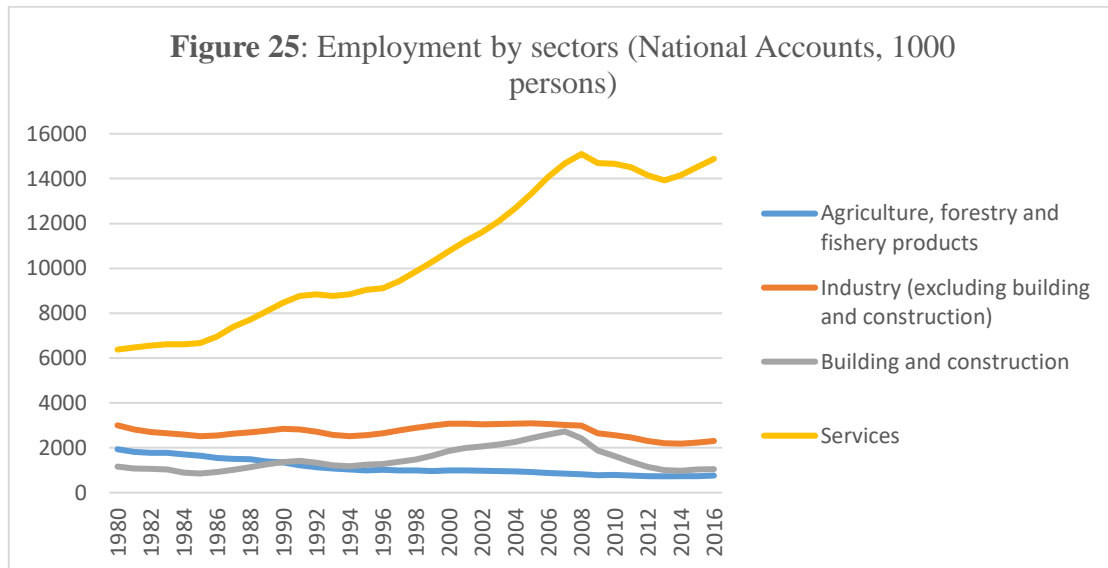
Therefore, it can be seen that while Real GDP grew in the last two cycles in a similar way - similar growth ratios -, employment, at least when measured in number of people, grew disproportionately during the last expansive cycle, unlike what happened in the 80's cycle. This fact indicates that employment growth during the last cycle was in fact disproportionate to the real magnitude of GDP growth.



If we compare employment and the total number of hours worked per year, we see that the trend between cycles is similar - in the 60's cycle it cannot be seen due to lack of data, although the subsequent stagnation appears clearly -. Total hours worked are also in line with the considerable increase in employment during the first 2000 and the retreat that the crisis implied, as well as the supposed recovery Spain is experiencing afterwards. As you can also see in the graph above, the average annual hours worked per person employed have been decreasing since the 70s, only seeing a small recovery in the late 90s, recovery that lasted a very short period of time.

Indeed, the number of hours worked increased by 11% during the second cycle and more powerfully increased by 40% during the third cycle. If you take a longer-term perspective, you can see how Spain really has been stagnant since the mid-1970s and until around 1994, and the change that occurs as of this year - a disproportionate 86% increase through the cycle and until reaching the peak - was only the result of a disproportionate growth in the construction sector due to the inflation generated by the Great Bubble. Afterwards, it is easy to perceive the considerable decline that occurs, once the Great Bubble bursts and the Great Crisis starts. In fact, the Spanish economy destroyed 1.8 million jobs between 1976 and 1984. Then it is true that it recovers them, but only to remain stuck in a total employment pool of about 13 million workers until 1993, when it lost around 1 million workers in approximately two years.

To put it differently, in the fifteen years that preceded the recession of 1993-94, the growth rates of total employment had been positive, but far from sufficient, resulting in a total increase of about 1.4 million jobs in 12 years (between 1980 and 1992)³¹. Then, over the next 14 years, the number of jobs that are created more than doubled. In fact, following the long-term outlook, the recession of 1993-94 with its undeniable job destruction laid the foundations for an important moderation in wages that helped to strongly increase employment growth during the following decade³².



The previous graph is interesting especially to explain more in depth the increase in employment that occurred during the first 2000. As it can be seen, the only two sectors in which employment has been growing progressively during the last decades are services and construction, which shows how the Spanish economy has been moving from a system where industry and agriculture had more weight to another economic model of services and construction, in this case until the Great Crisis of 2008. It can clearly be seen how the increase in employment in the last expansive cycle comes almost directly from very important increases in the service sector³³ and, very especially, in the construction sector. This sector was indeed the sector that less

³¹ "While it is true that, after 1992, the employment of women more than doubled and grew, in percentage terms, a lot more than the employment of men, in absolute terms the increases were about equal: 4 million extra employed males and 4.3 million extra employed females. Hence, Spain's "new employment" was tremendously egalitarian amongst the sexes while the most recent data suggests that the "new unemployment" is not. Because most of the labour adjustment, approximately 55 percent, has taken place in the construction sector, males are being fired an order of magnitude faster than females": Boldrin, Conde-Ruiz and Giménez (2010).

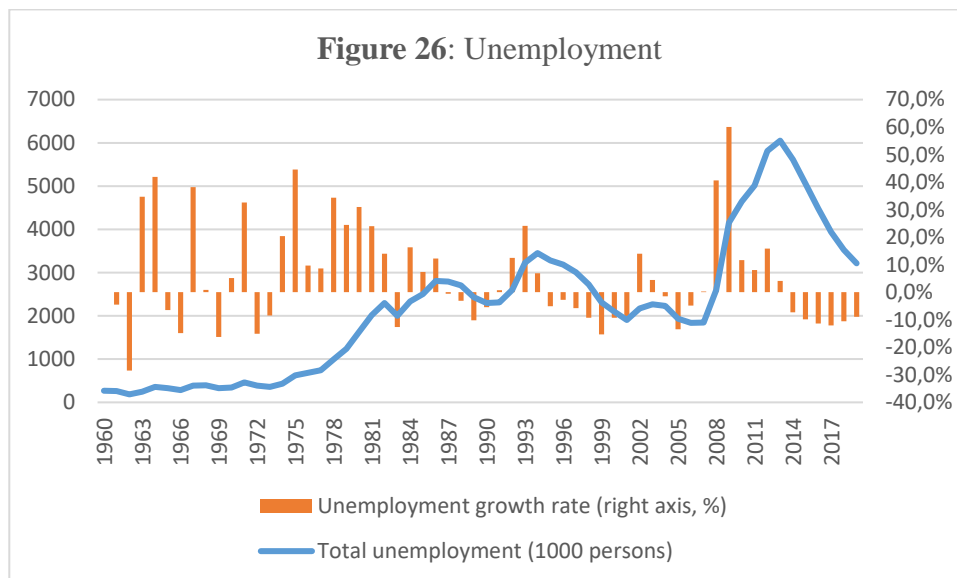
³² See Boldrin, Conde-Ruiz and Giménez (2010), and for the employment behavior during the late 90 and first decade of the 2000, see Bentolila and Jimeno (2006)

³³ Employment in the service sector almost doubled from 1990 to the climax of the last expansion, from 7.2 million in the second quarter of 1994 to 13.9 million in the third quarter of 2008. Therefore, the service sector is objectively the

people employed in 1980 and at the climax of the Real State Bubble it almost reaches the level of Industry, with a disproportionate growth since the end of the 90s. Unlike the services sector, still powerful in Spain and recovering, the construction sector fell sharply, to later live a stagnation from which still struggles to recover from³⁴.

2.5.2 Unemployment

Unemployment³⁵ has possibly been the biggest problem both socially and economically in Spain in recent decades. Since the 70s, there has been a steady increase in unemployment, from the particularly low levels experienced during the 1960s. This historical growth in unemployment, from which Spain has never fully recovered, only decreases to around 9% during the great expansive cycle of employment in the first 2000, to then increase to the highest levels in half a century after the Great Crisis of 2008. It has been therefore the conjunction, variable in time, of factors of demand, productive structure, costs and demographics, as well as institutional factors that generate rigidities in the labor market, which has determined a notable difficulty of the Spanish economy to generate employment and combat unemployment during a large part of the period extending from the mid-70s to the present.



During the 1974-75 crisis, a "stock" of between 2.5 and 3.5 million unemployed people was created, in a process that lasted more than ten years and peaked around 1985. That stock of unemployed people remained there for about 10-15 years and even during the best years of the last expansion, between 2002 and 2006, there were still 2 million people officially unemployed in Spain. The population of unemployed people for more than a year fell below 1.5 million only

one that grows the most: about 6.5 million went into services, 1.7 million went into construction and 1.8 million went into industry. However, the importance of the construction sector is its incredible relative growth in a few years, going from being a small sector to being the second sector for importance in employment in Spain (Boldrin, Conde-Ruiz and Giménez (2010)).

³⁴ It should also be noted that the figure that indicates the increases in employment is divided into a 55-45 ratio, between Spanish nationals and immigrants.

³⁵ Source: Labour force survey, unemployment statistics; Eurostat, National or OECD Annotation: "Unemployed persons are those aged at least 15 years, who are without work during the reference week, available to start work within the next two weeks (i.e. were available for paid employment or self-employment) and are actively seeking work (i.e. have actively sought employment at some time during the previous four weeks) or have already found a job to start later, i.e. within a period of at most three months. (See also ESA 95, paragraph 11.20)". Data for non-EU countries refer to the OECD definition. (from http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm)

in the 2000s. After that date and despite a much higher growth rate of the working-age population, which remained around 1.7% between 2001 and 2008, the number of long-term unemployed falls below 0.5 million³⁶.

Therefore, leaving aside the minimum unemployment cycle during the 1960s, we can see three employment cycles from the early 70's to the early stages of the crisis, which differ in their duration but, more importantly, differ in their impact on both employment and unemployment:

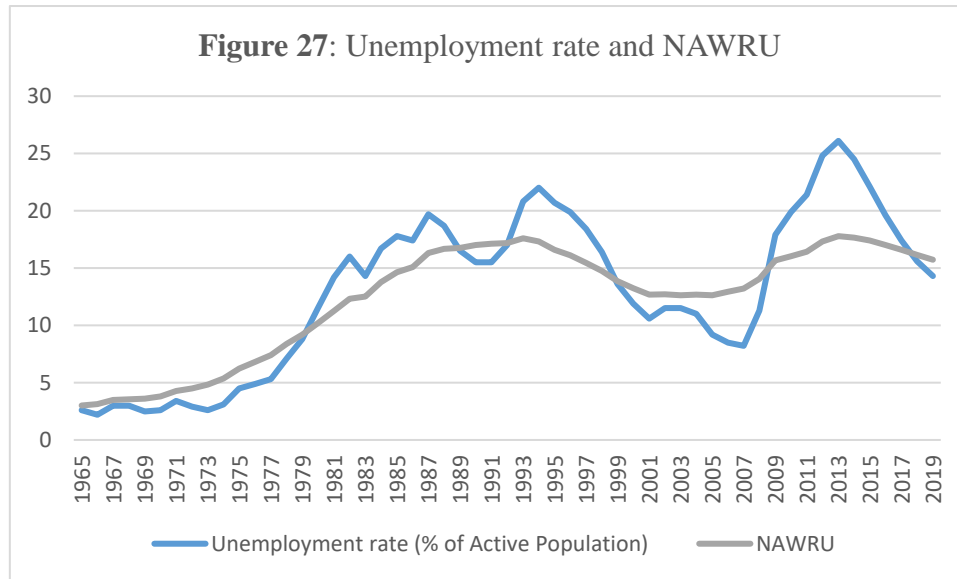
- A first cycle (1973 to 1985) where the unemployment rate on the active population, which was initially located around 4%, registered an increase process that led to the very high rate of 22% - the highest of Europe - in 1985.
- The second cycle, which is one of output growth (between 1985 and 1993), was certainly an expansion without considerable growth in employment, which led actually to a very small reduction in the Spanish unemployment rate. Unemployment effectively declined in these years of expansion, only to stand at 16.4% in 1991, to then rise again until reaching 24% in 1994³⁷.
- The third cycle of growth (between 1995 and 2007) led to a large increase in employment and a substantial drop in the unemployment rate during the Great Real Estate and Housing Bubble, as we have already seen. It was this bubble, as we will see later more in depth, the greatest modifier of economic variables in Spain.

Therefore, we can observe a negative and worrying persistence of unemployment in Spain, affecting many other indicators, not only economic, but also social and political³⁸; this persistence of unemployment, something that did not happen in the 60s, is due to different causes as we have said before. Unemployment remains one of the major problems for the Spanish economy and society, and certainly Spain has not been able to converge with the other European economies around this issue, that still remains an “anomaly” for Spain.

³⁶ Boldrin, Conde-Ruiz and Giménez (2010).

³⁷ Rojo, Luis Ángel (2002).

³⁸ “During the period of recession and stagnation, 1976-1984, GDP only grew by 14.4 per cent, in real terms, and employment fell by 16 per cent, with a loss of about 2.2 million jobs. In the next stage, which contains a complete cyclical fluctuation and a subsequent phase of expansion that would only begin to show signs of depletion in 2001, GDP advanced 65.5% and employment did so by 34% with a creation of almost four million jobs. In summary, throughout such disparate stages, occupation barely registered an improvement of 13% over the whole period of 1975-2000 and, at the end of the period, only represented 56.4% of the population of the same age, and a lower ratio by about eight points to the corresponding average of the European Union. The unemployment rate, on the other hand, was located around 14 per cent of the active population in the year 2000 - about five points above the average community rate - and reached 20 per cent for the two groups more negatively affected: women and young people. The persistence of unemployment has, for the rest, prolonged the situation of unemployment: at the end of the period, 46% of the unemployed were classified as “long-term unemployed”, that is, they had been looking for a year or more job. Unemployment has been, without a doubt, the most painful and pressing social and economic problem of the Spanish economy in the twenty-five years of reference”: Rojo, Luis Ángel (2002).



This previous graph is very interesting to compare unemployment and the NAWRU rate³⁹. It is interesting to see how in the periods of employment expansion, although brief as they were, employment grows moderately above the NAWRU rate, very powerfully in the expansion of the 2000s, which indicates an overheating of the Spanish economy and, especially, of the labor market. Despite this, we see how the natural rate of unemployment in Spain has been growing progressively from a very low level in the mid-sixties (less than 5%) to levels of around 15%, which becomes roughly the natural average unemployment rate of the Spanish economy, well above the values of the other Western economies. In the following sections I will try to explain what happened from the 70s onwards so that unemployment grew so steadily until it became chronically high.

2.5.3 Productive Capacity

Spain has progressed significantly in its process of convergence with the most advanced countries in the European area; however, at the end of the 2000s, Spain still showed a considerable relative delay both in the degree of capitalization and in the level of efficiency of its economy. The flow of investment, private and public, subject to intense fluctuations, has raised the physical capital/labor ratio by around 80% in the period, as an expression of the effort to tackle new activities and new production methods more intensive in capital, substituting work for capital and improving the provision of infrastructures. Despite this, the physical private productive capital fund per employee and the physical public capital fund per inhabitant were still, at the end of the 2000s, 19% and 29% lower, respectively, than the average values of the European Union. The same can be said of human capital and technological capital: although it is much more difficult to find indicators that make it possible to base calculations on their levels and variations over time and to make international comparisons, the estimates prepared for Spain indicate that in both

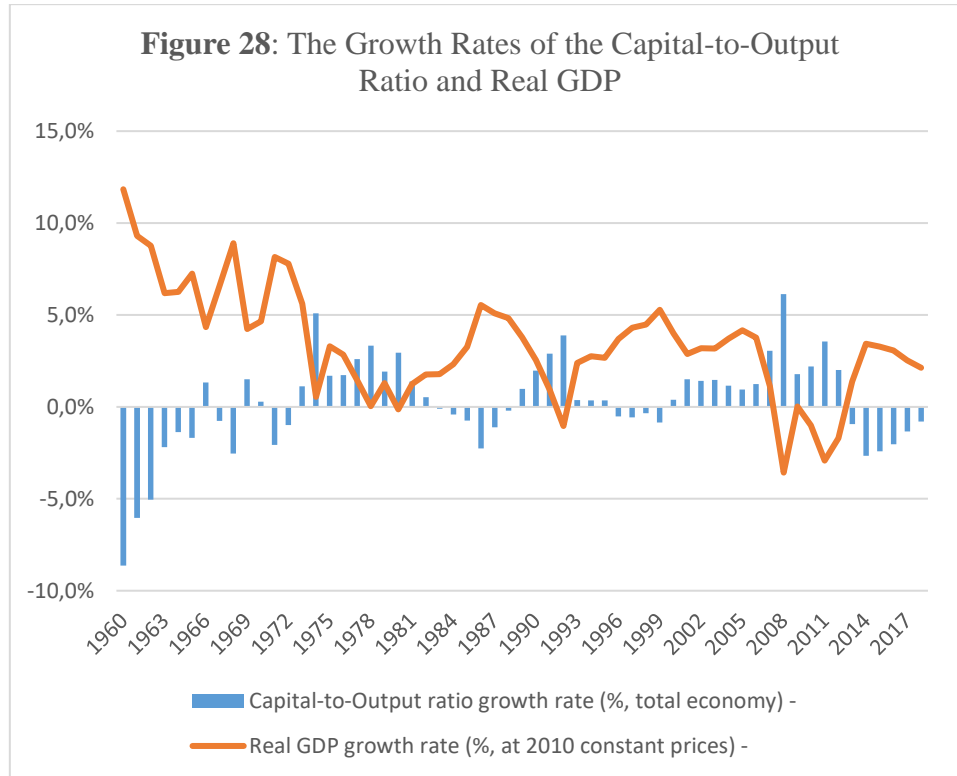
³⁹ « Le NAWRU est l'abréviation du terme anglais Non-accelerating wage rate of unemployment, c'est-à-dire « taux de chômage ne provoquant pas une accélération de la croissance des salaires ». C'est un concept proche du taux de chômage n'accélérant pas l'inflation (NAIRU), le lien entre chômage et inflation étant remplacé par le lien entre chômage et croissance des salaires.

Le NAWRU correspond au taux de chômage pour lequel le taux de croissance des salaires n'augmente pas, c'est-à-dire à une situation d'équilibre macroéconomique dans laquelle le taux de chômage est tel que la progression des salaires réels correspond à l'évolution de la productivité.

Tout comme le NAIRU, le NAWRU est utilisé par des économistes comme mesure du taux de chômage structurel ». NAWRU. Wikipedia. <https://fr.wikipedia.org/wiki/NAWRU> (Accessed 2018-05-23).

indicators important progress has been made in the reference period, but delays persist in both periods with respect to the European Union average, and this relative delay is much more important at the technological level than with the human capital⁴⁰.

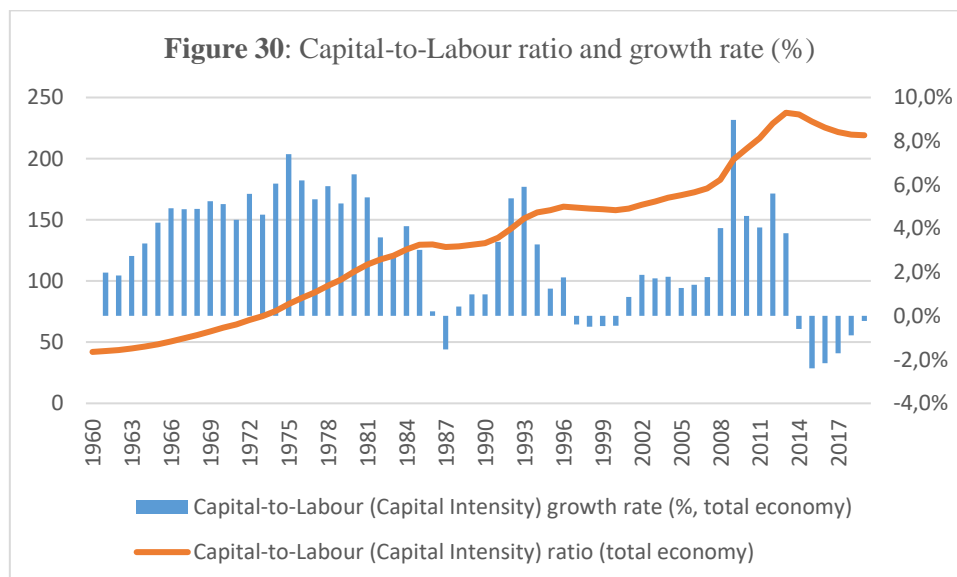
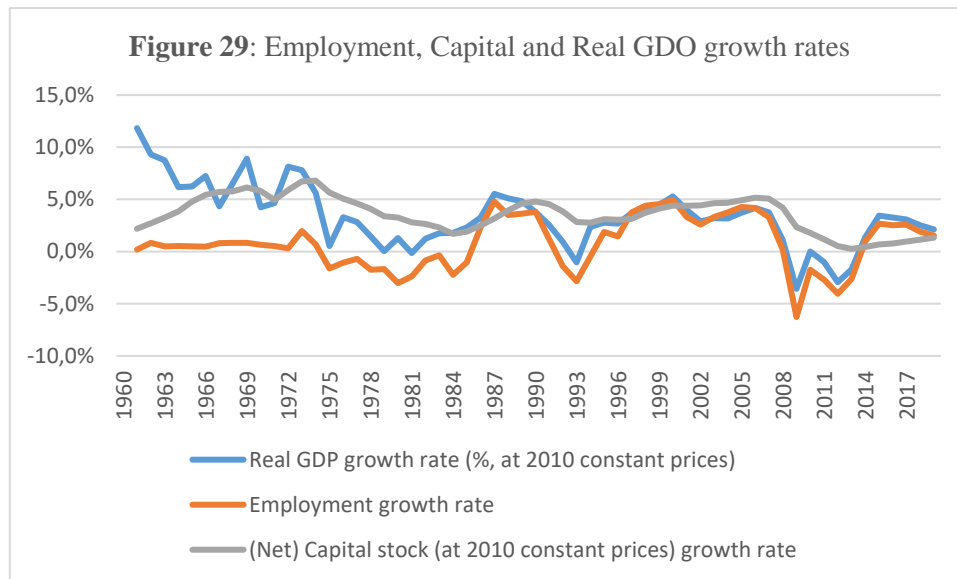
To assess more in detail how productive capacity evolved over time we look at the movements of the capital-to-output ratio at 2010 prices. Our data, in this case, reach back to the 1960s.



It is interesting to observe how during the great expansion that begins at the end of the 50s and ends around the year 1973, the capital-to-output ratio drops dramatically, which suggests either very high gains in productivity - for the same capital, the production increases considerably - or a "wearing out" of productive capacity due to an investment rate lower than what a sustainable growth process would require, that is, if I invest in capital less than what should be taken into account, production levels goes up. It is very likely that the 60s were a period of doing "more with less". After 1974, the capital-to-output starts to grow again and does so cyclically⁴¹.

⁴⁰ From Rojo, Luis Ángel (2002).

⁴¹ This growth of the capital-to-output ratio, "it is hardly consistent with the predictions of standard growth models, be they of the endogenous or exogenous variety" (Boldrin, Conde-Ruiz and Giménez (2010)). Check this article also to see the different correlations occurring during the different growth cycles.

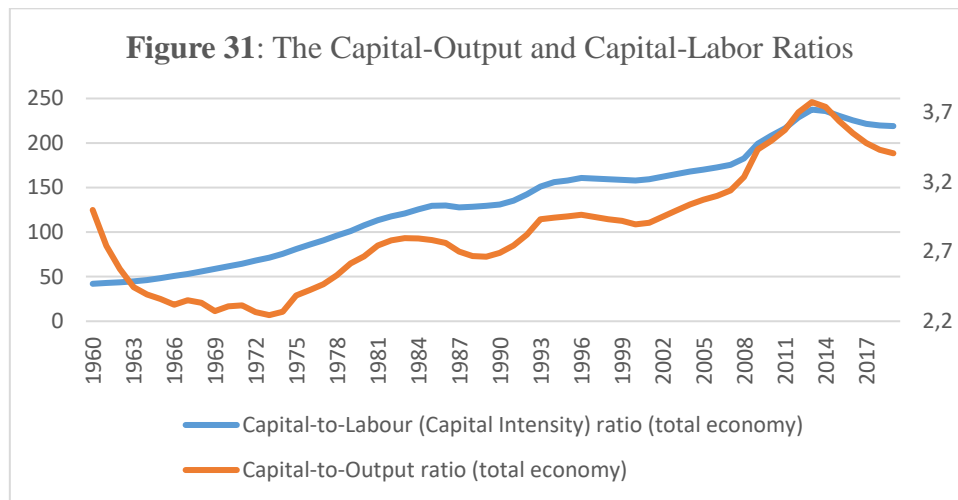


From the two above graphs, the first clearly shows the close relationship between employment, real GDP and capital stock, and the two expansive cycles plus the shock of the Great Crisis of 2008, from which the economy begins to recover, although it seems that in a process of stagnation right now. The second graph shows how relative to employment, the stock of capital has been increasing progressively in Spain. The two expansive cycles are again perceived, although this time less markedly.

It is interesting to see also how the 60s were years of great expansion of the capital stock with respect to employment, which possibly shows a strong capital-intensive industrialization, although employment during that decade remained pretty stable, especially in relation to the powerful growth of the capital stock. However, both variables grew less than Real GDP during this decade, which indicates that Total Factor Productivity (TFP)⁴² grew considerably during this

⁴² "In economics, total-factor productivity (TFP), also called multi-factor productivity, is the portion of output not explained by traditionally measured inputs of labour and capital used in production. TFP is calculated by dividing output by the weighted average of labour and capital input, with the standard weighting of 0.7 for labour and 0.3 for capital. Total factor productivity is a measure of economic efficiency and accounts for part of the differences in cross-country per-capita income. The rate of TFP growth is calculated by subtracting growth rates of labor and capital inputs from the growth rate of output." Total Factor Productivity. Wikipedia. https://en.wikipedia.org/wiki/Total_factor_productivity (Accessed 2018-05-23).

time. It can also be clearly seen in the first graph how, after the recession of 1973-74, there is a period of long stagnation, which defines a change in the statistical relationship between capital and output. This change is largely due to companies, often afflicted due to initial structural weaknesses, which were faced, on the one hand, with the sluggishness of demand resulting from the energy crisis and, on the other hand, with a very intense advance in real costs. Since 1975, the economy generally enters a period of contraction of productive investment and very weak advances in production that were to last about ten years. The unemployment rate – as we've already shown –, began a rapid upward march that employment protection regulations could not stop; on the contrary, administrative difficulties and high firing costs meant that many companies, instead of adjusting their labor forces, had to close their activities with the consequent loss of productive capacity, as we have seen in some charts above and as we will explain more in detail in later sections explaining the political-economic and legal changes of the period.



This last graph is also important to see the development of Capital-to-Output and Capital-to-Labor ratios⁴³. It is interesting in this case to note that both indicators tend to behave counter-cyclically in Spain, as seen with the decrease of both in the expansive cycle of the late 1980s and, especially, the stagnation of Capital-to-Labor in the expansive cycle of the 2000s. Also, it is interesting to see how, after approximately 1974-75, the proportions of both move in stages and their growth rates become similar in absolute value, while in the 1960s they were having a different behavior.

Another very important fact that appears very clearly in this graph and that is in turn another of the "specific" facts of the Spanish economy differing from other economies, is the considerable increase of both Capital-to-Output and Capital-to-Labor⁴⁴ after the Great Crisis of

⁴³ "[...] If labour costs are high, firms will look to substitute capital for labour. For example, in Europe, waiters are equipped with mobile devices to send the order directly to kitchen. This is more efficient use of labour and so less is required. In countries with lower labour costs it may not be necessary or advisable to invest in the mobile order equipment, therefore, they will have a lower capital to labour ratio. In the short term it is easier to vary labour than the capital stock. In recessions capital to labour ratios tend to be higher as firms get rid of workers [...] Areas with high capital-labour ratio will tend to have higher real wages. This will encourage workers to migration from a low capital-labour ratio (low wage areas) to those with higher real wages. This will tend to reduce real wage disparity and reduce the gap of capital-labour ratio. For example, workers in north China have moved to south-east China where wages are higher [...]". Capital-Labour ratio. *Economics help*. <https://www.economicshelp.org/blog/glossary/capital-labour-ratio/> (Accessed 2018-05-23).

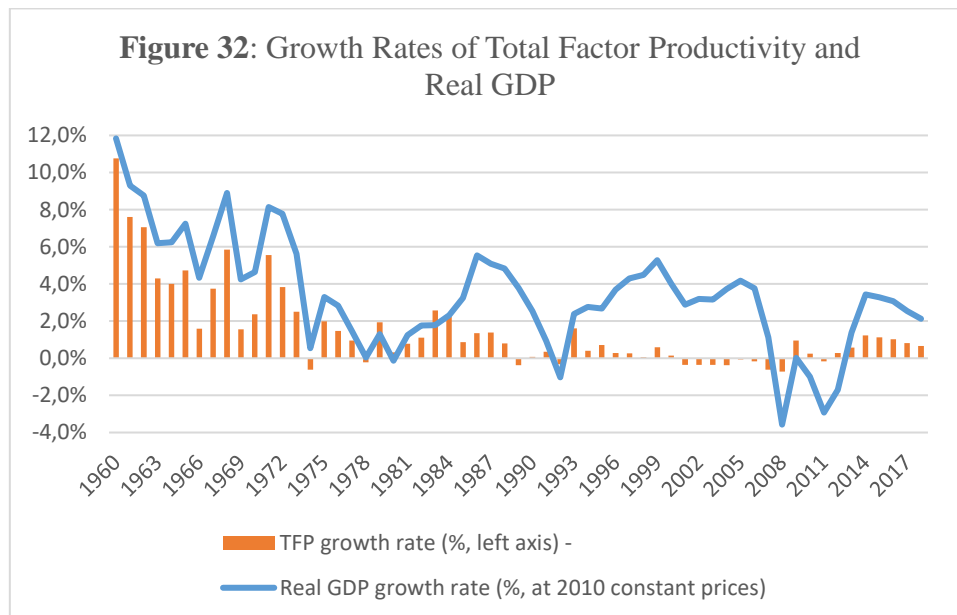
⁴⁴ "The capital-labour ratio is at the heart of the 'one-sector regional growth model' (McCombie (1998) Urb. Studs 25): as people move from lower real waged cities-regions to higher ones, the capital-labour ratio in stronger regions decreases, and increases in weaker regions. The process stops as soon as the capital-labour ratio is the same in all regions. P. McCann (2001) shows how, in time, this development improves the welfare of society as a whole". Capital-Labour ratio. *Economics help*. <https://www.economicshelp.org/blog/glossary/capital-labour-ratio/> (Accessed 2018-05-23).

2008. This fact will be touched in depth in section 3.3 and 3.4, where the Spanish "productivity puzzle" will be analyzed.

2.5.4 Productivity

The GDP advance, in real terms, has had its main origin, for the whole period, in the increase of the average productivity of labor, given the modest growth of employment. However, this productivity has been lower than the European Union average during the last decades - especially from 2002 to 2010, although employment grew enormously -⁴⁵, and only after the Great Crisis, the Spanish productivity has increased considerably to be above the average of the Union and the OECD⁴⁶, this being an anomalous behavior which will be attempted to answer later ("productivity puzzle"). In addition, the behavior of productivity has been uneven, with a downward trend in its rate of progress throughout the period: its rate of growth was considerable in the initial stages of the 70's stagnation and recession to descend later to stand at very weak rates of advance - less than 1% - in the second half of the nineties.

In fact, the evolution of productivity in Spain is possibly the key to the relative "underdevelopment" of the Spanish economy, its low wages⁴⁷ and high unemployment compared to other neighboring European nations. As will be seen below and as we have already indicated in a general way in the previous sections, Spain has a serious problem in relation to the growth of labor productivity and TFP, and the evolution of both is also anomalous when compared with the same historical series from other developed countries from around.



⁴⁵ "In the 2000s, for example, productivity was still 8 percent lower than the [European] Union average; the seventeen percentage points that [...] still separated the GDP by Spanish capital from the corresponding average community figure at the end of the 2000s, are roughly half attributable to the low employment rate and the modest productivity per employed person in our economy": Rojo, Luis Ángel (2002)

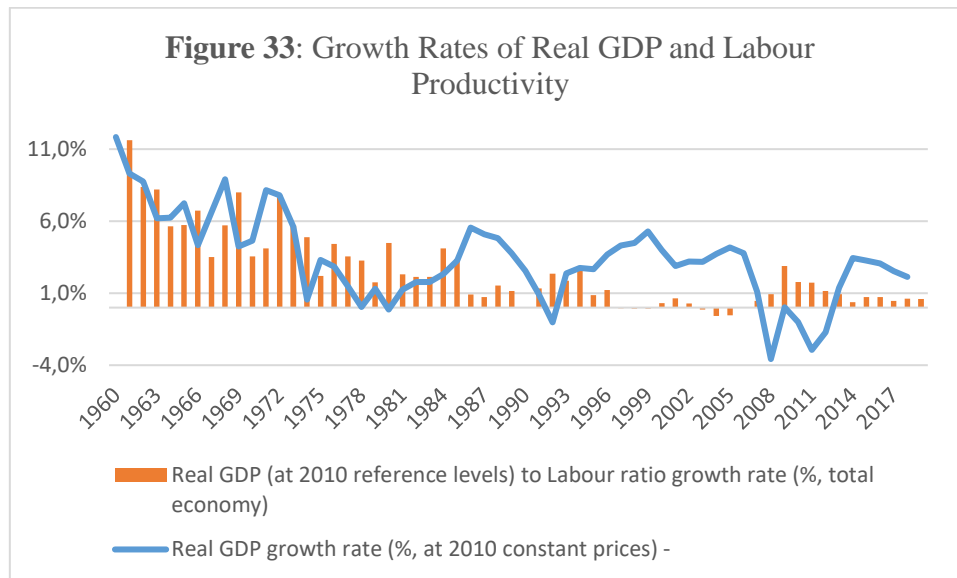
⁴⁶ As of approximately 2010, productivity - measured, for example, in GDP per hour worked - exceeds the average of the European Union and the OECD. See the comparison in: GDP per Hour worked. OECD Statistics. <https://data.oecd.org/lprdy/gdp-per-hour-worked.htm> (Accessed 2018-05-23)

⁴⁷ "Unemployment and low productivity of small businesses are the determining factor of Spanish income inequalities": Álvarez (2016)

In this graph we can see more clearly the relationship and growth rates of Real GDP and Total Factor Productivity (TFP), being the latter another of the keys and big problems of the Spanish economy. The evolution of TFP since the 60s very much helps explain some of the developments and idiosyncrasies of the Spanish economy. As we see in the graph, the 60s was a decade of high growth of both Real GDP and TFP. However, starting in 1973, when the decade of stagnation of the Spanish economy began, TFP declined enormously, remaining thereafter, except for the two expansion cycles, well below the growth rates that had experienced during the decade of the 60. In fact, since 1973, TFP will barely exceed 2% any year.

It is also important to see how the expansion that occurred in the 1980s is an expansion where TFP grows more than in the expansion of the late 1990s, where, paradoxically, Spain has even negative TFP negative growth rates, despite the enormous growth of employment. Therefore, Spain was facing an "unproductive" expansion of its economy⁴⁸, which makes a lot of sense when it is known that this expansion was mainly an expansion of the low-productivity services sector and the real estate sector, sectors of low productivity and where many low-skilled people were employed in general. Explaining more concretely what happened from 1996 to 2006⁴⁹ it is something that will be carried out in the third part of this work, proposing some hypotheses throughout the most recent studies. Therefore, the big question that arises is: what happened in the Spanish productive system thereafter to lose all the growth in TFP experienced during the 60's?

The following figure shows the evolution of another standard indicator of aggregate productivity: labor productivity and it is compared with the GDP growth rate as well.



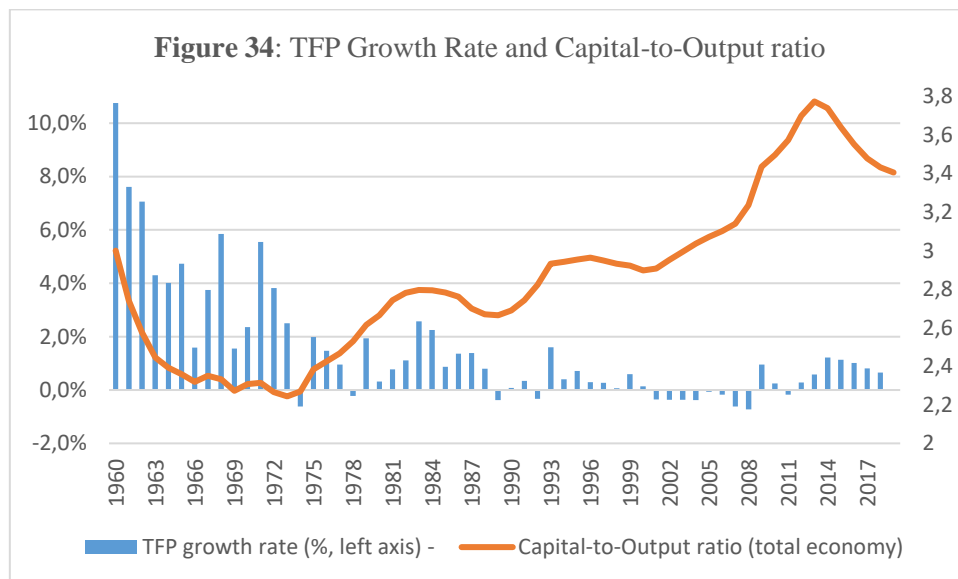
From the mere observation of both indicators (TFP and Labor Productivity) over the last decades three messages can be extracted:

⁴⁸ "This is added to - or is a consequence of - an already "special" Spanish production system in which there are hardly any industrial companies with national capital among the largest, although there are many subsidiaries of foreign companies; the business summit with national headquarters is populated by the financial sector, energy, telecommunications and also construction, which has had great influence on the national economy and led to giants with significant presence abroad". Ver Álvarez (2016)

⁴⁹ "The weakening of the investment impulse in productive capital and the slow rate of progress of economic efficiency since the mid-nineties - that is, in a phase of boom and rapid growth of employment in the Spanish economy and that has witnessed, in addition, a strong expansion in high technology sectors in the majority of industrial countries - raises, at the end of the reference period, some serious members about the future of our economy": Rojo, Luis Ángel (2002)

- A constant and continuous decrease in the growth rates of both productivity indicators, especially when compared with the relatively high growth rates during the 1960s⁵⁰.
- A countercyclical growth in productivity in Spain since 1975. The expansion of Real GDP has been accompanied by productivity deterioration during the last 30 years (after the mid-1960s). Both measures of productivity increased during recessions and periods of slow growth, while they declined when production and employment grew at rates above the average. In the case of the last period of growth, closely linked to the expansion of the Spanish Real Estate and Housing Bubble, productivity suffers negative growth rates while the economy and employment grew enormously. This "productivity puzzle" will be discussed more extensively in section 3.3 and 3.4, as we have already said.
- This cyclical growth of productivity was not always the case. The correlation between productivity and RGDP growth was "usual" and expected according to the models during the 1960s and before 1975; however, as of that year, this correlation changes and becomes negative⁵¹.

The following graph is interesting because it shows the very small growth rates of TFP after 1975, at the same time that the Capital-to-output has been growing steadily during those times. That is to say: Spanish productivity has decreased or, at least, has stagnated, while its productive capacity has been increasing, albeit with ups and downs, and despite the significant decline in which we are since 2008, very related to the shock that supposed the Great Crisis of 2008 and the great number of companies that had to close, especially in the services and construction sectors, heavily affected by the crisis.



⁵⁰ "This evolution of labor productivity has had its origin in the temporal behavior of its proximal determinants: the progress of the capital/labor relationship and the improvement in the degree of efficiency of the economy - approximated by the rate of variation of productivity total factors -. The capital-labor ratio rose considerably in the first decade of the period, with the strong decline in employment and the substitution of labor for more capital, registered significant fluctuations through the fluctuations of productive investment and employment in the 1985- 1994 and later entered, halfway through the nineties, into a stage of semi-stagnation": Rojo, Luis Ángel (2002)

⁵¹ "The correlation between the growth rates of output and output per worker changed from 0.95 between 1961 and 1975, to -0.60, between 1976 and 2008. The change in the correlation between the growth rates of output and the TFP changes from being 0.95 in the first period to -0.25 in the second part of the period. A significant change". See complete correlations in: (Boldrin, Conde-Ruiz and Giménez (2010)). The authors of the paper also ask what the causes of this change in the correlation may be and add how such radical changes cannot be reconciled with the predictions of any of the easily available off-the-shelves models: "[...] Nor can they be attributed to one class or another of shock from the "economic cycle", because the first cycle lasted almost twenty years and the second has been with us for more than thirty years. The current recession, which has caused a remarkable jump in labor productivity reinforces the puzzle".

Technical progress can enter into a country from abroad through the importation of equipment goods that incorporate new technologies, direct investments, technology transfer contracts, etc.; or it may be the result of research and development (R&D) activities carried out within the country itself. In the Spanish case, the foreign origin of technological innovation is very important, and it is because the total Spanish R&D expenses, as a proportion of GDP, are low and much lower, of course, than those corresponding to the average of the European countries - which are, in turn, quite smaller if compared with those of the United States -. The attention given by Spanish companies to R&D activities is very modest - more than could be justified by the high proportion of small companies in the country -; multinational companies, on the other hand, show a very low propensity to develop R&D activities in their Spanish subsidiaries; the public sector, in short, which naturally attends higher education and basic research in its own centers and seeks to stimulate private technological efforts, has increased its low spending in this area during the last decade, but it is far from compensating for the sluggishness of the private sector. The weak technological effort of Spain - much lower than what would correspond to its relative economic position - constitutes one of the most serious problems for the future of its development. In section 3.4, these issues will be treated more in depth, trying to find the ultimate causes that might explain this situation.

2.6 Factor Prices and Factor Shares

2.6.1 *Capital and Labour shares. Cyclical Labour Shares*⁵²

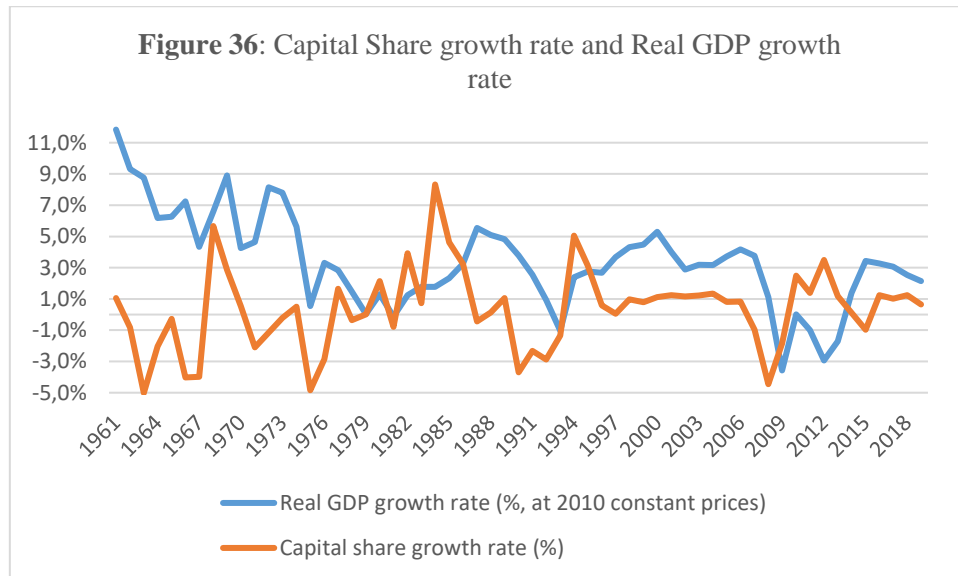
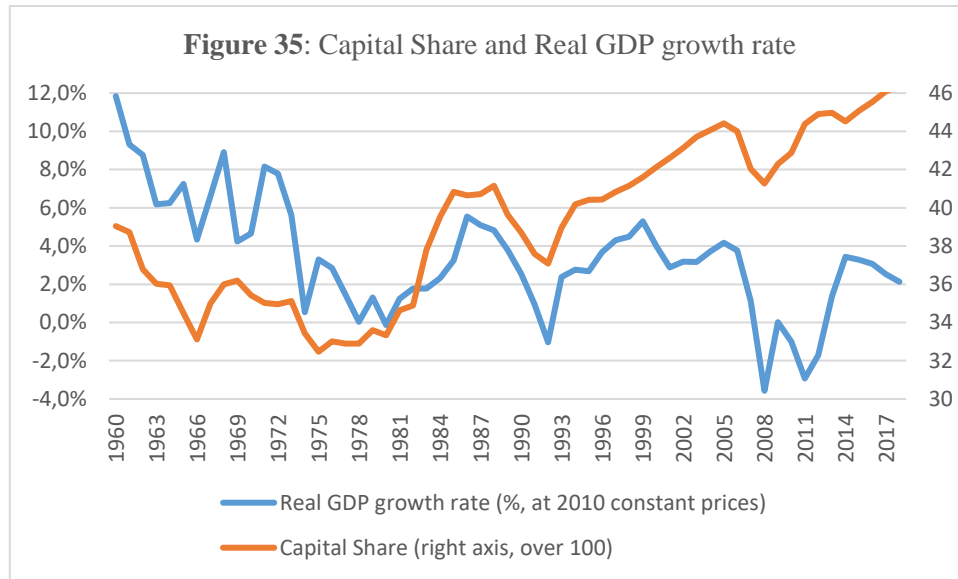
The following four figures show the shares factor and its growth rates, together with the growth rates of production (Real GDP). In a very visible way, the Spanish Capital Share follows a cyclical pattern until the last expansion, after which the trend changes its sign⁵³. However, and as will be seen in the following figures, the Labor Share has a countercyclical tendency. Unlike what other authors pointed out, it can be seen how the variables have not returned to behave cyclically after the crisis⁵⁴.

Apart from a cyclical behavior with GDP during the first decades of the analyzed period, we see how the Capital Share increases enormously after the first 90's. At the same time, and as will be seen in the following graphs, there is a gradual decrease in the Labor Share. One reason for this major change in trend may be that the composition of employment changed from more labor-intensive jobs to more capital-intensive sectors, where labor shares are lower, which is in line with an exponential growth of the Real Estate and Housing Bubble in the first 2000, unlike an economy of low unemployment and improvements in productivity and wages during the 60s and early 70s.

⁵² The Labour Share here is calculated – from data extracted from AMECO Database – as: Ratio of compensation of employees to GDP at market prices less taxes linked to imports and production and subsidies, less gross operating surplus and mixed income of households and NPISH, and plus consumption of fixed capital by households. “[...] Labour share of income – wages and salaries are usually taking a smaller share of GDP in developed economies. Profit and dividends are taking a bigger share of GDP, though [...] Labour productivity growing faster than real wages – implies falling share of GDP for wages and salaries”: Labour share of GDP. Economics help. <https://www.economicshelp.org/blog/135320/economics/labour-share-of-gdp/> (Accessed 2018-05-23).

⁵³ “Notice, first of all, that these large and regular oscillations contradict the standard growth model we just presented, where shares are supposed to be constant and, therefore, acyclical. While many researchers tend to minimize the relevance of this fact, we believe it contains important information about how the growth process develops and how technologies and markets interact, hence we should examine the cyclical nature of factor shares a bit more closely”: Boldrin, Conde-Ruiz and Giménez (2010)

⁵⁴ “Our hunch, though, is that when the data for the current recession will become available, the cyclicity, as described below, will become apparent again [...]”: Boldrin, Conde-Ruiz and Giménez (2010)



Labor shares⁵⁵ have been considered stable for a long time and, therefore, attracted little attention from research and policy discussions⁵⁶. However, in recent years, a growing body of evidence suggests that labour shares have experienced a secular downward trend with important consequences. For example, with the decrease in labour shares, improvements in macroeconomic performance may not translate into improvements in personal income of households⁵⁷. And the data shows that over time and in many countries, a greater share of capital is associated with greater inequality in the personal distribution of income⁵⁸. Therefore, the importance of labor

⁵⁵ Taken from IMF (2015)

⁵⁶ “At least until the 1980s, a stable labour income share was accepted as a ‘stylized fact’ of economic growth. Over the past decades, however, this conventional wisdom has been challenged by the empirical evidence, which indicates a downward trend for the labour share in many of the countries for which data are available. The OECD (2012) has observed, for example, that over the period from 1990 to 2009 the share of labour compensation in national income declined in 26 out of 30 advanced countries for which data were available, and calculated that the median (adjusted) labour share of national income across these countries fell from 66.1 per cent to 61.7 per cent. A more recent OECD calculation finds that the average adjusted labour share in G20 countries went down by about 0.3 percentage points per year between 1980 and the late 2000s. Similar downward trends have been observed by other international institutions (IMF, 2007; European Commission, 2007; BIS, 2006; ILO, 2012)”: IMF (2015)

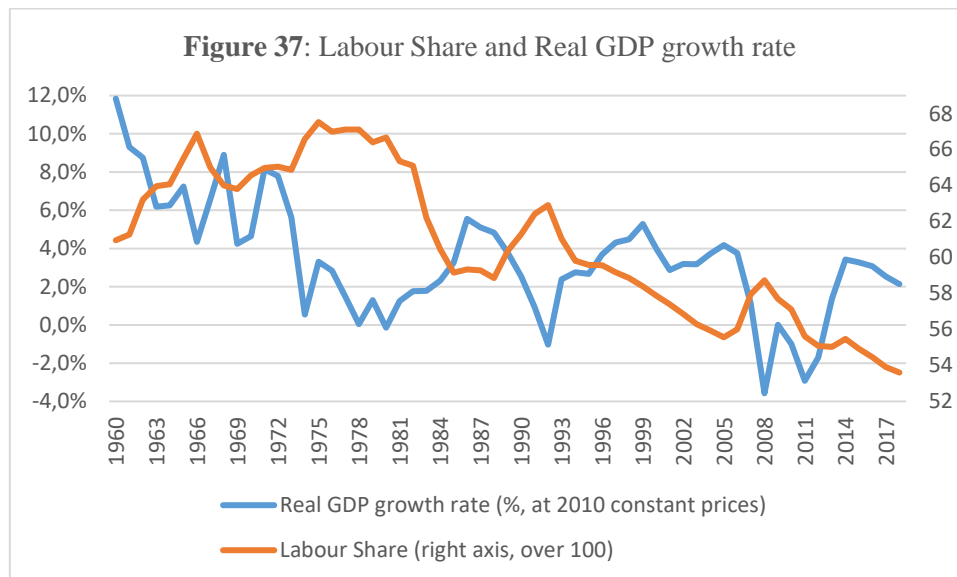
⁵⁷ See Atkinson (2009).

⁵⁸ See Piketty (2014).

shares can be perceived as their trends negatively affect the main macroeconomic aggregates such as household consumption, private sector and investment, net exports and public consumption.

If we analyze the labour share⁵⁹ in Spain - since the capital share obviously behaves in the opposite way - we can see how it increased substantially between 1960 (when the first reliable data was available) and around 1975: it increased by almost 10% of GDP, and after that "structural adjustment" it was never lower than 58% before the mid-1990s. This indicates possibly an important rigidity in the labor market or, if not, a "trickle down" of the business profits of the time in higher salaries for employees, with wage growth in line with GDP growth.

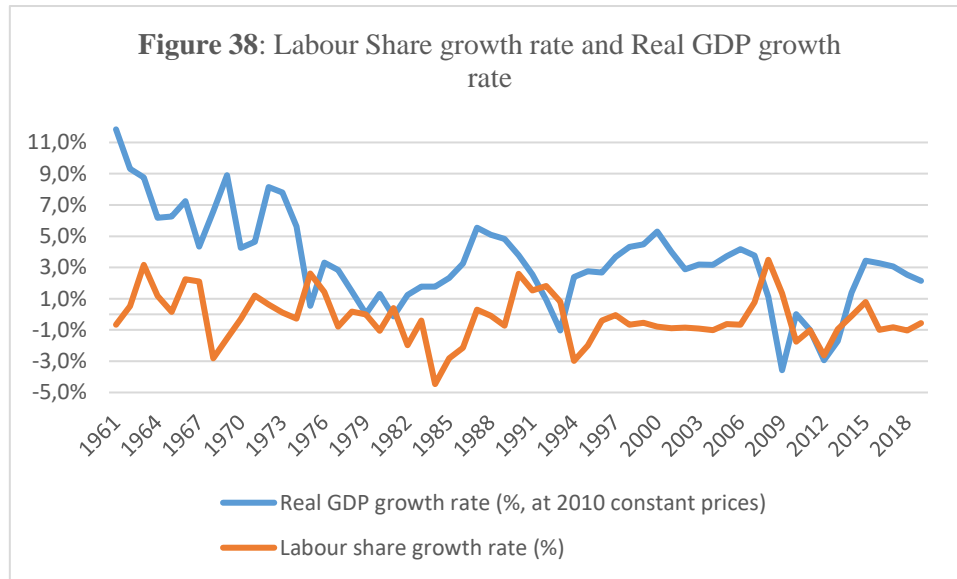
Secondly, labor share is strongly counter-cyclical from the beginning, but after 1995 this relationship is less clear. At the beginning of the 90 it recovers, although during the whole decade of the real estate boom it diminishes, until arriving at the crisis of 2008 where another increase is perceived⁶⁰. The years 2000's are a period of rapid increase in employment and, before the year 2000, the Labor Share always increased when employment increased. Therefore, sometime in the year 2000, something happens that puts an end to a countercyclical correlation that had been there for many decades. Again, and although this fact will be explored further on, the Great Real Estate Bubble appears as the great hegemon that determines these profound changes in the behavior of the Spanish productive system, with productivity growing in this period well below the growth of wages⁶¹ thanks to the false Wealth Effect created by the housing bubble.



⁵⁹ "National income is the sum of all income available to the residents of a given country in a given year. The division of national income between labour and capital is called the functional distribution of income. The labour income share (or labour share) is the part of national income allocated to labour compensation, while the capital share is the part of national income going to capital. A falling labour share often reflects more rapid growth in labour productivity than in average labour compensation, and an increase in returns to capital relative to labour": IMF (2015)

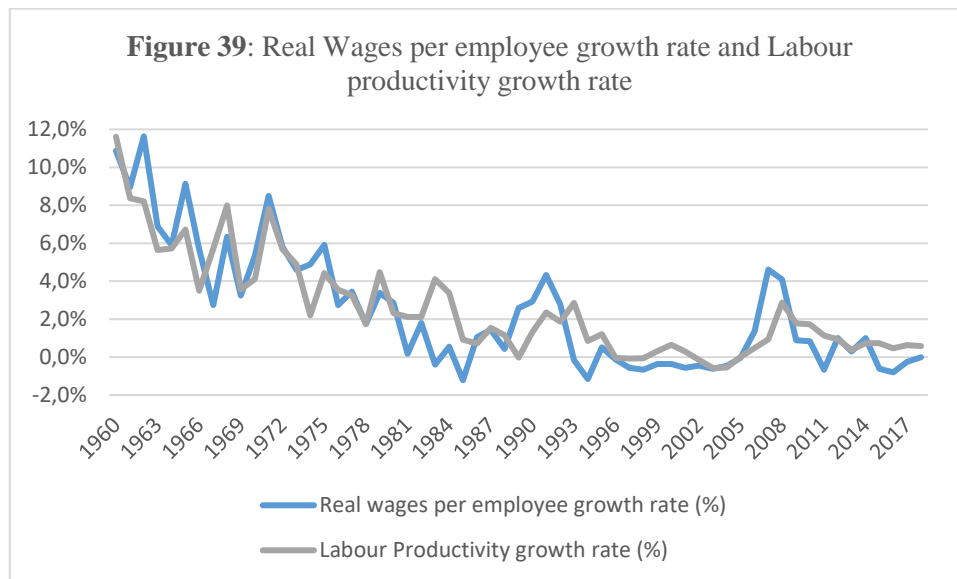
⁶⁰ "[...] This reflects the reality that wages tend to be less volatile than profits during economic downturns. The OECD observed: "In times of economic recession, this decline [in the wage share] has typically paused, but then subsequently resumed with a recovery. The recent economic and financial crisis and subsequent sluggish recovery have not deviated from this general pattern" (OECD, 2012b, p. 112). Indeed, in most countries, the labour share tends to increase in the initial years of recessions and then resume its negative trend afterwards. This countercyclical behaviour of labour shares in advanced economies has been well documented (see for example the box in IMF, 2012)": IMF (2015)

⁶¹ "Trends in labour shares are to a large extent driven by the comparative evolution of average wages and labour productivity. Under most circumstances, when average wages increase more rapidly than average labour productivity, the labour share increases. Conversely, when the growth in average wages lags the growth in labour productivity, the result is a decline in the labour share": IMF (2015)



2.6.2 Correlation between real wages and labour productivity

The following graph and the analysis of the data confirm that, in general, wages and productivity in the Spanish economy behave in a "normal" manner.



On average, real wages grow when labor productivity grows and vice versa. However, in the Spanish case there is an important anomaly between employment, labor productivity and real wages. Prior to 1975, variations in real wages have no significant correlation with variations in employment; however, the correlation becomes strongly negative after that year⁶². A negative correlation, like the one observed in Spain since 1975, can only be obtained absent any type of technological progress, since companies, which face a diminishing marginal productivity of labor, travel along their static demand curve for labor. This behavior is part of the "productivity puzzle" of the Spanish economy, since most of the standard models (in which employment is basically determined by labor productivity) predict that the correlation must be positive and very strong.

⁶² "A low correlation between the aggregate real wage and employment is also a feature of the US data at business cycle frequency, and it coincides with the prediction of a standard RBC model when labor contracts are present or labor supply is highly elastic (Danthine and Donaldson, 1990, Boldrin and Horvath 1995)": Boldrin, Conde-Ruiz and Giménez (2010)

Therefore, after 1975, Spain becomes a "country of anomalous growth": as employment grows, productivity and real wages do not grow or even decrease.

Another fact that can be extracted from the analysis of the Spanish economy has to do with the low salaries in comparison with other European neighboring economies and with a decrease of these in the last decades. Although this is a general trend in most Western economies since the early 1980s, the Spanish case contains its own characteristics that help to understand this phenomenon. Some of these most important reasons are⁶³:

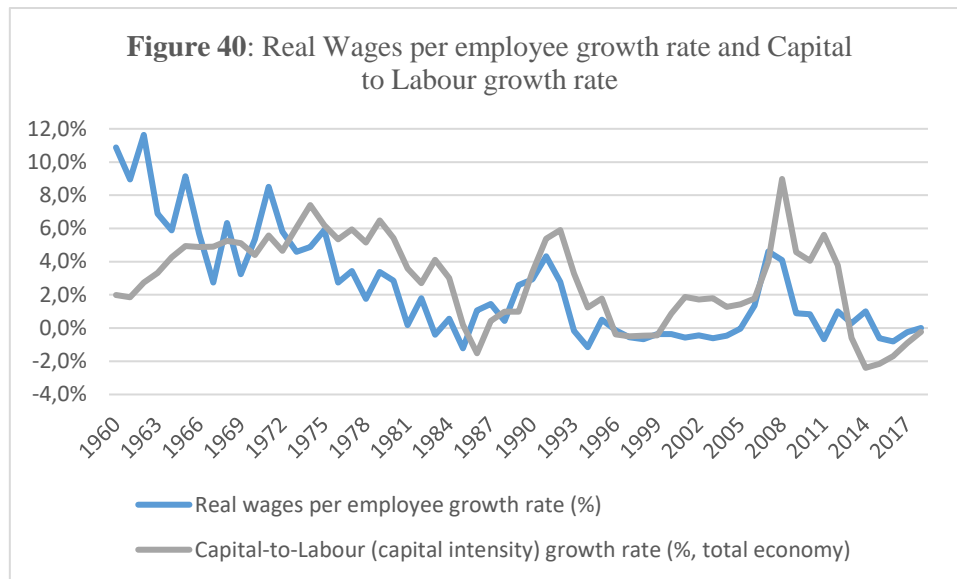
- Aging of the Spanish population and low birth rates (something also common to other Western nations) continued since the late 60's. In the case of Spain, there is also a lower flow of immigration throughout the period – except for the exceptional period of the early 2000s –, as Spain remains a greater source of migration, which affects the labor supply.
- The rate of unemployment is especially high in Spain, continuously and chronically, as has already been said, and especially in relation to the young collectives and, to a lesser extent, the female and immigrant groups, especially after Great Crisis of 2008. This is certainly due to some structural problems of the Spanish labor market (high temporality of contracts, dual system, high dismissal costs, etc.).
- The Spanish labor market is very sensitive to variations in GDP, which means that unemployment fluctuates intensely whenever there is a fluctuation in GDP. This explains how during the crisis, unemployment in Spain grew much more than in other countries where even the fall in GDP was higher, but the unemployment-GDP fluctuation is lower.
- As we have already said, low productivity in Spain in the last decades (the exception is the years following the economic crisis) makes the Spanish industry not as productive or competitive as in other countries⁶⁴, which results in lower wages, especially in a low productivity services-based economy like Spain.
- Trade unions have great power of collective bargaining on wages and, thus, there are strong rigidities that prevent wages from adjusting automatically.
- Government benefits go largely to passive employment (unemployment subsidies, etc.), while the active items to promote employment are small and often inefficient (something that seem to be changing after the last labor reform).

2.6.3 Co-movements between the Capital-to-Output Ratio, Factor Prices, and Factor Shares

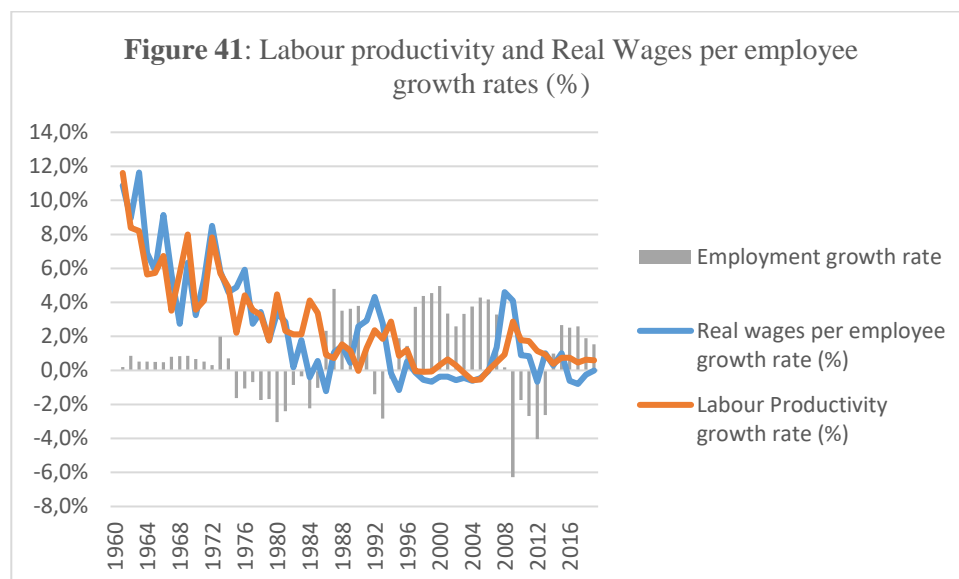
The following figure is interesting to see the relationships between the growth rates of real wages per employee and the growth rate of Capital-to-Labor.

⁶³ See Álvarez (2016)

⁶⁴ "For example, in Spain productivity is closely linked to the size of the business establishment, since the average Spanish company tends to be smaller than, for example, France's, and therefore productivity tends to be smaller in Spain as well. In fact, in Spain, 49% of private employment is concentrated in microenterprises or small businesses, compared to a lower 43% in France. According to the circle of entrepreneurs there is a -25% difference between the productivity that occurs between Spanish microenterprises - which account for 28% of private employment - and European ones, and this difference is nevertheless greatly reduced in multinational or large companies": Álvarez (2016)



Regarding the previous graph, it is interesting to see how in the 1960s and until 1975, growth rates are inversely related: the real wage per worker grows less on average than the Capital-to-Labor ratio; However, as of 1975, the rates are directly related: when one grows, the other does so in a similar proportion. That is to say, both variables behave thereafter in a very similar way. We see therefore that the growth of real wages moves in line with the growth of productivity, but only from 1975, since during the decade of the 60, when the other aggregate variables behaved according to the standard model⁶⁵, these two didn't.



Finally, this last graph is very interesting to see how real wages and labor productivity correlate negatively with employment, especially since 1975, and how the ratios of wage and labor growth sink very strongly starting from the late 90's and in the first half of the 2000s, where Spain witnessed very high Real GDP and, especially, employment growth. However, they start to rise again at the dawn of the economic crisis, until reaching peaks not seen in decades, another "anomaly" added to the Spanish "productivity puzzle"⁶⁶.

⁶⁵ See: The Solow Growth Model. <https://www.unc.edu/~jbhill/Solow-Growth-Model.pdf> (Accessed 2018-05-23)

⁶⁶ "Because we know that employment and real wages are negatively correlated in Spain, this simply means that (relative to output growth) employment does not grow enough to make up for the drop in wages, hence labor share decreases": Boldrin, Conde-Ruiz and Giménez (2010)

2.7 The keys of what has been said and shown in this part

From what has been said above, we can draw some conclusions based on the analysis of the data that can explain some of the most important trends and some of the characteristics of the Spanish economy during the period that goes from 1960 to the present. This analysis also serves to better analyze what future awaits Spain based on what we have already seen from the historical analysis of its behavior, and to be able to draw a realistic plan for the Spanish economy based on its characteristics and anomalies and how they could be resolved.

In summary, the most important conclusions or the most distinctive aspects that we can extract from the analysis and that, in a different proportion will be developed in following sections, are:

- (1) Low productivity growth: At the end of the 70s Spain was - and has remained that way since then - far from the technological barrier. Total Factor Productivity (TFP) experiences an important increase during the 60s. However, after 1975, productivity growth rates decreased dramatically, growing only slightly until 1995, and experiencing almost no growth at all afterwards. However, productivity growth, which was procyclical before 1975, becomes counter-cyclical. Only after the crisis of 2008 there's a slight increase in the growth of the TFP.
- (2) Rigidity of the labor system: At the end of the 70s Spain had a rigid and uncompetitive labor system, which explains some of the structural problems of the labor and competitive system in Spain; this system begins to be reformed in the 80s and during the 90s; however, the reforms only help to create and consolidate a dual labor system, which is still not competitive, and which becomes an important cause of the anomalies in productivity and employment growth seen in the early 2000s.
- (3) Active population and immigration: During the last four decades active population in Spain went from being one of the lowest in proportion to the total population, to rise enormously from the mid-1990s due to a massive increase in immigrant that created a pool of cheap labor in Spain. In turn, this massive inflow of immigrants meant a social and economic change for the country, while increasing employment numbers during the Great Real Estate and Housing Bubble
- (4) Three major growth cycles in 50 years: The growth of the Spanish economy has never been totally constant or continuous, but has been divided into three major periods of approximately 15 years each.
 - a. A first period in the decade of the 60s of incredible and sustained economic growth;
 - b. A decade of stagnation from 1973 to 1983, where all the variables stagnate, plus a difficult international economic situation (oil crisis in 1973) and a turbulent political situation in Spain; this gives way to:
 - c. The second growth cycle - much more modest than the first one during the 60s -, with little increase in employment, but quite a bit of productivity. It lasts until the early 90s, when it peaks and finishes in a recession again; and finally:
 - d. A third stage of significant growth - from 1994 to 2006 -, especially in relation to employment, that increased considerably even though productivity growth was negligible - contrary to what happened in the previous growth stage - and which ends abruptly with the 2008 Great Crisis. The crisis is then followed by a period of stagnation to return to a path of growth now, although always under a blanket of weakness.

These three periods are characterized by ending in major crises or recessions and by bringing large swings in almost all the standard ratios analyzed.

- (5) “Productivity Puzzle”: whereas before 1975 all the aggregate variables in Spain had behaved roughly in line with what standard growth models prescribed - with the sole exception of the Capital-to-Labor intensity and real wages - this correlation changes completely after 1975. The correlation between indicators as of that year not only changes considerably in magnitude, but also in sign: large increases in employment - as in the expansion of the first 2000 - are followed by low productivity; employment, then, is no longer positively related to productivity after 1975. In fact, after the Great Crisis of 2008, this "productivity puzzle" is again experienced: labor productivity increases enormously at the same time as Real GDP and employment sink. There is also a negative correlation between real wages and employment for the period 1975 - 2008⁶⁷. Also since 1975, the correlation between real wages and labor productivity becomes positive, and growth rates tend to be very similar.
- a. In terms of employment and real wages, whereas before 1975 there is a positive correlation between employment and real wages, small but positive, from that year on they begin to be negatively correlated, increasing their negative correlation throughout the 90's and the first 2000's. That is to say: to greater employment growth, lower salaries; and to lower employment growth, higher salaries⁶⁸. This fact, which will be discussed somewhat more extensively onwards, is closely related to the dual hiring system in Spain and the high proportion of temporary and low-skilled contracts during this period.
- (6) Variation of the Capital ratio and factor shares: the Capital-to-Labor and Capital-to-Output ratios never behaved in a constant or monotonous manner. The same happens with factor shares, which are far from being constant, and they rather suffer large variations, which systematically tend to correlate with GDP growth.

⁶⁷ See the correlations for the different periods in: Boldrin, Conde-Ruiz and Giménez (2010)

⁶⁸ “[...] while before 1975 employment and real wages are positively, if weakly correlated, they become negatively correlated after that. in particular after 1995 (-0.68) and after 2000 (-0.82)”: Boldrin, Conde-Ruiz and Giménez (2010)

3 OF HOW THE CONSCIOUS EXPERIMENT OF A MODEL BASED ON A LOW PRODUCTIVITY SERVICE SECTOR, CHEAP TOURISM AND CONSTRUCTION ENDED UP TRANSFORMING THE ENTIRE SPANISH ECONOMY (FOR THE WORSE)

In this section I will discuss some of the major problems of the Spanish economy in recent decades, problems that help to better understand and explain the weak position of Spain now, the severity of the financial crisis and the difficulties in the recovery, as well as the anomalies of the growth of the Spanish economy during the decades before the crisis. The analysis of these issues - that without wanting to be totally exhaustive, I do intend to touch on the fundamental aspects - will serve in the next section to know the main problems facing the Spanish economy or those that Spain will face, leading to draw a plan of appropriate action to correctly tackle some of these issues. The main thesis advocated here is that, at least since the mid-1980s, the transversal and intrinsic cause that helps explain, directly or indirectly, many of the developments that have occurred in the Spanish economy - and also with respect to institutions, the political system and the social situation - as well as the big obstacles that have appeared is the Great Real Estate and Housing Bubble, and more generally, the productive model for the Spanish economy that started to be created around the mid-80's.

3.1 Short-term exuberance, long-term ruin

This first section will mainly tackle the Great Real Estate and Housing Bubble (1985 - 2007), which, as I said at the beginning of this part, is the greatest distorting entity of the Spanish economy and its productive system in recent decades⁶⁹. Besides, this Bubble was accepted by governments of different sign, as it benefited them all in the short term⁷⁰. I will show how the weakness of the Spanish economy has much to do with the severity of the explosion of the bubble and how the massive increase in public and private debt that has been so difficult for Spain has been among the last consequences of the artificial inflation of the real estate market. The weak recovery and the very difficult situation that Spain faces economically and politically is also a direct consequence of the effect of creating a massive bubble that later exploded, leaving

⁶⁹ And so it was written by one of the most prestigious economic historians in Spain: "Spain is not facing a simple recession, or a crisis more or less serious. The so-called upward cycle from 1996 to 2008 was nothing more than a mirage and led to a disaster that will take a long time to recover": Maluquer de Motes, Jordi. España en el país de las maravillas. El País. 19-02-2012 https://elpais.com/economia/2012/02/17/actualidad/1329491637_532783.html (Accessed 2018-05-23)

⁷⁰ Even Luis Ángel Rojo, a person of great public importance in Spain as a reference economist, suggests the common and transversal interests of the entire political class. The coming of the Ruin was common to governments of all signs, which exemplifies very clearly the strongly oligarchic character of the Spanish system: "The different political formations that have occupied power throughout the period - the Union of the Democratic Center, from 1977 to 1982; the Spanish Socialist Workers Party, from 1982 to 1996, and the Popular Party in recent years - differed in their political-economic conceptions and governed, from them, adapting to the demands and possibilities derived from changing contexts. However, the results successively achieved - the success of the process of political change and the turn towards a new economic policy, first; the advances in the modernization and social welfare of the country and the incorporation and adaptation to the European Economic Community, afterwards, and the subsequent conduction of the economy towards a path of growth with stability that allowed its early access to the Economic and Monetary Union - indicate that, despite the differences in criteria and approaches - existing, although exaggerated, frequently in the political debate - there was a sufficient coincidence of basic objectives among the political groups that gave continuity to the process through the changing and often difficult circumstances of the period": Rojo, Luis Ángel (2002)

innumerable relations between politics, economic agents and the administration in the creation, development, climax and explosion of the Great Real Estate Bubble.

3.1.1 When housing and construction became the (speculative) hegemon: bubble hegemony, generational ruin and debt overhang

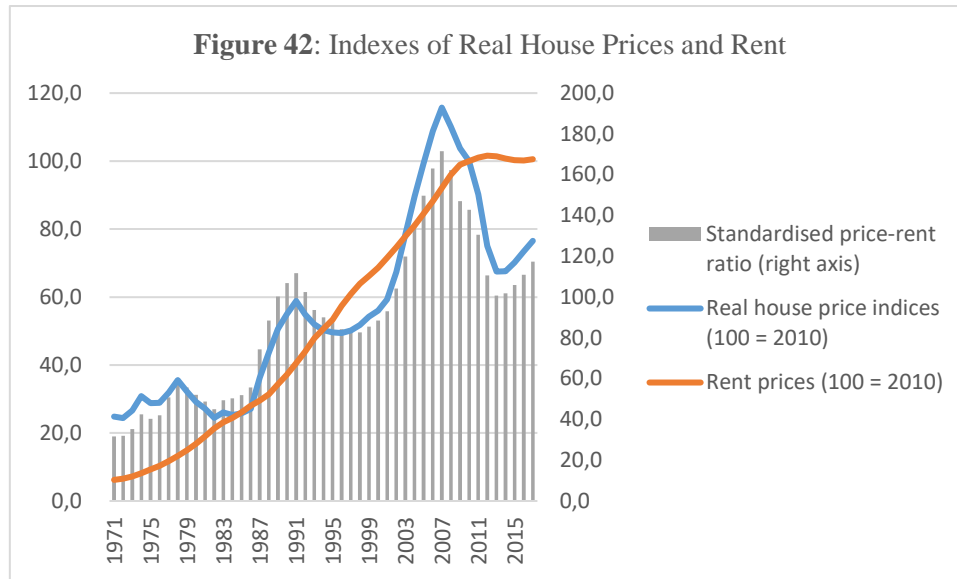
3.1.1.1 The genealogy of the Great Bubble⁷¹: the beginnings of the Great Bubble (1986 - 1989), stabilization (1990 - 1997), The Great Bubble's explosive rise (1986 - 1989) the Great Crisis: Turning Point, Credit Crunch and Debt Overhang (2006 – 2012⁷²

From the following graphs, very visual and clarifying of the process of creation and massive inflation of a Great Real Estate and Housing Bubble, different stages of the speculative process that mark the genealogy of the Big Bubble can be established. This section will show the different stages of the real estate bubble in Spain and discuss their developments and the most relevant events that occurred during this period.

⁷¹ The Spanish bubble, although strange in the history of Spain due to its magnitude and distorting effect, follows almost perfectly the different stages already exhibited by Minsky in his classic Theory of Financial Instability: (1) Proposal: every financial crisis begins with a disturbance and makes people see that sector differently. (2) Prices start to rise. As prices increase more, people begin to notice. (3) Easy credit: the price increase is not enough for a bubble, but it must be stimulated with credit, often going hand in hand with financial innovation (in Spain a mixture of a new law of Savings Banks and the development of the Finance system). (4) Overheating of the market: depending on the effect of easy credit is noticed, the market begins to overheat; in this way the volumes begin to be stimulated and shortages appear, which makes prices start to accelerate, and easy benefits are collected. In turn, more external agents are attracted and prices run wild. From this moment, a loop is created where the laggards enter the bubble that, when exploiting it, are usually the ones that are more exposed. (5) Euphoria: critical moment in which, although there are voices that warn of the imminence of a crisis, the process follows its own inertia and it is very difficult to stop it at the moment when the gains are greater. (6) Experts collect benefits: it is the moment when the most experts (financial analysts, large banks, major investors, etc.) begin to see that the process has run wild and begin to close positions and collect benefits. The exposed who are after the outbreak will depend on how soon or late they have realized the imminence of this and have been able to sell on time. (7) The outbreak: occurs either by a contagion of the mass of people following the movements of some important "Market-makers", or by some shock or unexpected news of great relevance for stability. From this moment, the euphoria is transformed into fear and panic, and the landing is usually abrupt and forced. Prices plummet, credit is cut, and losses begin to accrue.

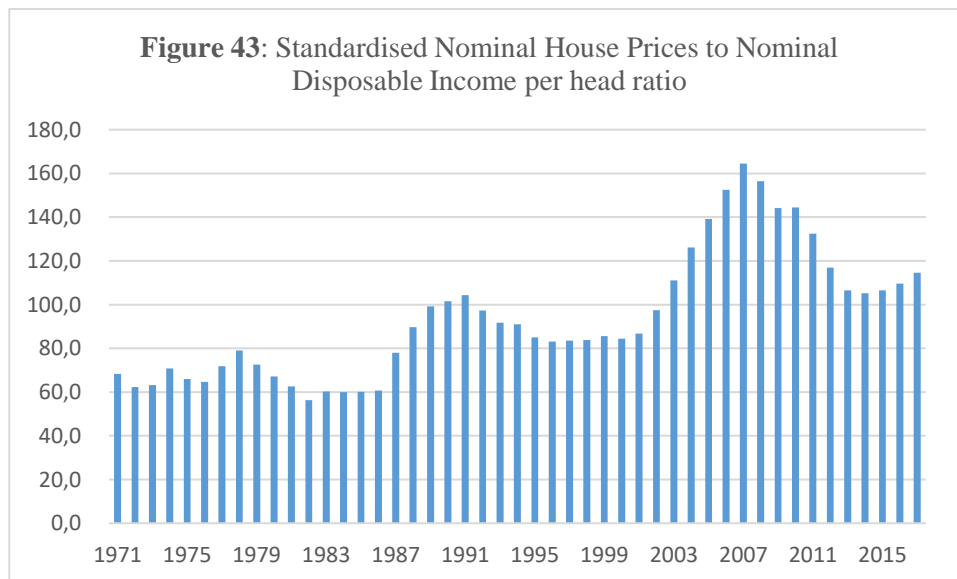
See article and diagram with Minsky cycles in: Run Pozzi. Etapas de una "Burbuja Financiera". El Paniol. Miércoles, 18 de noviembre de 2009. <http://elpaniol.blogspot.com.es/2009/11/fases-de-una-burbuja-financiera.html> (Accessed 2018-05-23).

⁷² I take this division of the analysis developed by the Internet user "pisitófilos creditófagos", who has been for many years an authority in the analysis of the Housing Bubble. He has also created a genealogy of the bubble, which is original but extremely useful to understand the process. His articles can be found in the following internet debate forum: Transición Estructural. Entries about Internet user "pisitófilos creditófagos". Internet Forum. <https://www.transicionestructural.net/index.php?topic=1213.2280> (Accessed 2018-05-23)



An interesting and important fact that can be seen from the data on housing price indices and real GDP growth rates analyzed in the first part is that the cycles of growth of the Great Real Estate and Housing Bubble, and the cycles of growth of the Spanish economy since the mid-1980s, are almost coincident and of similar magnitudes. In fact, the growth cycle in housing prices from 1997 to 2006, which is the largest in the bubble period - its biggest growth euphoria period - also coincides with the greatest growth of Real GDP and, above all, of employment that occurs in the Spanish economy. As will be seen, this growth is mainly driven by the development of the real estate and construction sector, and serves to explain how a process of such spectacular increase in employment did not bring with it an equally considerable increase in labor productivity (we will talk more extensively about the "Productivity puzzle" in section 3.3).

The following graph is especially interesting to perceive the true speculative nature of the bubble: the massive increase well above nominal disposable income, which clearly shows that it was not just a typical supply and demand process; prices increased inconsiderately at the end from the 90s to levels well above what the population was really and objectively willing to afford.



Therefore, the genealogy of the Great Real Estate Bubble in Spain is also the genealogy of economic growth in Spain in the last three decades and the explanatory cause of many of the anomalies and cycles that occurred during those years in the Spanish economy. It will also be

seen how the bubble explains, as has been said before, the difficulties of the Spanish economy after the economic crisis, the sociological, political and economic shock that it entailed and the consequences that it has left.

3.1.1.1.1 The beginning of the Great Real State and Housing Bubble (1986 - 1989):

The 60s were a decade of strong expansion of the construction sector, closely linked to the growth of the Spanish economy and the savings of families. This expansion was affected by the contraction that began in the mid-seventies that imposed an important retreat until the second part of the following decade. It was from then on when the real estate and construction sector in general began to experience its great expansion, driven by residential, industrial and commercial construction and by the effort of the public sector to improve infrastructures - especially transportation -. During these times, the distance separating Spain from the European Union average had been considerably reduced. Yet, in the 90s construction entered its greatest stage of intense expansion, mainly encouraged by residential investment than by investment in infrastructure, which has been limited by the objective of reducing the public deficit. At the same time, some of the most powerful construction companies strengthened their presence in foreign markets⁷³.

The year 1985 marks the beginning of what after a few years will be the largest bubble ever lived by Spain and one of the largest in recent history. In this year the basis for the bubble were simply set up through a decree law and a law. This system is the same that in the following decades almost inexorably will work and encourage the inflation of real estate prices. On the inner plane, then, these two triggers of the bubble are⁷⁴:

- (1) Decree Law 2/1985 (Boyer Decree) of April, 30th, on economic policy measures. It marks an inflection point in urban lease contracts. The main consequence was to end the protection of the tenant and, instead, stimulate the purchase of housing. This was carried out through the alteration of rent contracts' duration regime that suppressed the legal or forced extension existing over them before. This modification clearly favored the owners' interests as they didn't have to face any constraint now as to indefinite rent contracts and they were allowed to be extremely flexible with rent contracts at the expense of the tenant.

After this Decree law was approved, homeowners and landlords could rent their properties freely, without having to wait for the duration of the contracts to be extended indefinitely. The forced extension of contracts, established for years in the special urban rent laws, was thus suppressed in one fell swoop. The Boyer Decree meant a liberalization of the rental market and a major change in the mentality of the owners when renting their properties, to the extent that freed them from the specter of the "indefinite duration". It made it possible for the rental, housing or local

⁷³ From Rojo, Luis Ángel (2002).

⁷⁴ Other measures can be added that, although of smaller extension, also helped to gestate and to impel this process of rise of prices and real estate speculation, which shows that the process of turning to a system based on construction was conscious: a) implementation of the legislation that de facto banned "activos financieros al portador", so that the black money is channeled exclusively to the real estate sector or, if not, to a cheap promissory note issued by the State itself; and b) the extension of the deduction-IRPF for housing to the second residence; (c) until then houses and apartments were bought with letters. from 1983-4 only through mortgage, less secure and with less impositions. (d) the VAT (whose pro-rata rule obliged the financial sector to swell to carry out oversized real estate transactions) (e) the prohibition on the issuance of "activos financieros al portador" that forced the holders of "B money" (as it was called at that time) black money) to liquidate their opaque assets and polish the money in the real state. Ver: Transición Estructural. Entries about Internet user "pisitófilos creditófagos". Internet Forum. <https://www.transicionestructural.net/index.php?topic=1213.2280> (Accessed 2018-05-23)

contracts to last as long as the parties had agreed, neither more nor less, without at the end of the term any enforced extension in favor of the tenant. This undoubtedly came to facilitate the recovery and availability of the property by the owners at the end of the rent term and if it were of the owners' interest, put them back in rent under the new market conditions, which were already starting to increase year after year⁷⁵.

- (2) The first Law of Savings Banks – *Ley de Cajas* – since the transformation of the political regime in the mid-70s was the Law of Governing Bodies of Savings Banks (LORCA in Spanish, 1985). This law gave power to territorial entities of those small savings banks (*cajas*) whose headquarters were established in the same region. This law allowed a large number of politicians and councilors of municipalities, regions or autonomies to be on the *cajas* boards⁷⁶; it also allowed that historical institutions such as these *cajas* – which traditionally had been the financial sector for the poorest people who did not have access to the large banking sector –, to begin to be the main entities financing the real estate bubble and the different urban projects that were carried out in each one of the regions, regions that had their own *cajas* to finance this process while mixing the public and the private.

In the external plane there's at this moment another fundamental aspects to understand the development of the bubble in Spain:

- (1) The entry of Spain into the European Community in 1985, which in subsequent years will help, albeit indirectly, the real estate cycle (and structural) thanks to the massive influx of European funds ("euro-aids") and capital Foreign⁷⁷, most of the time invested in infrastructure, construction and housing⁷⁸.

⁷⁵ The date of May 9, 1985, of entry into force of the Boyer Decree, is still expressly contemplated by the Urban Leasing Law of 1994 when it establishes in its transitory dispositions the legal regime applicable to the old rental contracts. So in 1994, instead of pulling down the system, it is updated and reinforced.

⁷⁶ It was the socialist party that implemented this law, and the newspaper El País said at the time: "Savings banks have a marked regional and even provincial character, which favors the Socialist Party, which even before 1982 It already had a strong local representation, which is about mobilizing that quota of political power to achieve control of 40% of the Spanish financial system": Pedro de Tena and Antonio Barreda. La ocupación socialista de las Cajas de Ahorro. Libertad Digital. 2015-03-14 <https://www.libertaddigital.com/espana/politica/2015-03-14/la-ocupacion-socialista-de-las-cajas-de-ahorro-1276543138/> (Accessed 2018-05-23).

⁷⁷ Figure extracted from Bde Balance Contable CEE. Financial Red. Data. <http://finacialred.com/contribuyente-neto-en-la-u/bdebalanceconcee/> (Accessed 2018-05-23).

⁷⁸ "The external opening of the economy in the financial sphere - especially since 1985 - was of great importance and appears to be articulated with the intense process of liberalization of the national financial system, whose impulse has been fundamentally internal, although related to the evolution registered in the main industrial countries. After the collapse of the exchange system established in the Bretton Woods agreements, a large number of countries began a process of progressive liberalization of capital movements, together with financial innovations facilitated by technological advances in the areas of information and communications, leading to the increasing interconnectedness of freer national systems and to the advancement, as the process extended, toward financial globalization. Spain, at the beginning of these developments, was in a very backward situation: its exchange control system was very strict, only the imports of long-term capital received a relatively liberal treatment and its national financial system - dominated by banks - was subject to all kinds of interventions regarding its institutional structure, the operations and instruments that could be used by each type of institution, the prices charged and the destination of an important part of its resources. The last seventies witnessed the beginning of a process of gradual flexibilization of exchange control that became openly liberalizing since 1985 and that led, finally, to the full liberalization of capital movements, in all terms, in February 1992": Rojo, Luis Ángel (2002).

Figure 44: Balance, Income and Payments of Spain in the European Community

Positive balance (Spain receives more than what she gives); Values of 2012 corresponds to the sum from January to September divided by 9 and multiplied by 12 (Bank of Spain data)



These internal and external factors together with a conscious change in the productive system in Spain that transformed the 60's "old" industry into a new system⁷⁹ based on services – process that was largely encouraged by selfish political motives and interests, as well as short-term perspective and pressures coming from the European Community, as I will discuss later - required employing thousands of unemployed Spaniards that after the process of "industrial reconversion" lost many of their jobs. This led Spain to the creation and first exponential growth in the price of housing, creating the framework for the subsequent large inflation of the bubble.

As of this date, with real estate prices still low and mortgage rates also reaching record lows, demand would begin to increase rapidly. Sales were going to shoot up in the next phases of the bubble - as will be seen - and the available properties, which were still scarce in the first years of the boom, were going to force a considerable increase in the new urban and construction projects. all⁸⁰. Obviously, the laws of supply and demand were not absent for too long, and prices began to increase as the shortage took over the real estate market.

3.1.1.1.2 Stabilization (1990 - 1997):

After a first excessive growth period, the stabilization came, although nominal prices never really fell. In 1989⁸¹, the transition process to the European Monetary System of 1979 began, process that culminated with the monetary unification.

⁷⁹ Some Internet user has called this new model, the "model construction-consumption-lumpenturism-euroaid of 1986": Transición Estructural. Entries about Internet user "pisitófilos creditófagos". Internet Forum. <https://www.transicionestructural.net/index.php?topic=1213.2280> (Accessed 2018-05-23)

⁸⁰ Undoubtedly, the bubble has created a "generational crisis" in Spain, with the explosive rise in prices 1986-1989, the population was forever divided between those who bought before and later, between winners and losers of the Great Bubble. There were an almost entire generation trapped in the Ponzi scheme as they bought expensive real-state and housing assets and then, after the explosion of the bubble and falling prices, were unable to sell, losing income and savings. It happened that this generation was above all those who were born from 1960 to 1980; while the winners were mostly those pertaining to the 1940 to 1960 generation. The post-crisis political developments in Spain are closely related to this fact.

⁸¹ "In April 1989, a "Committee for the Study of Economic and Monetary Union", chaired by the then President of the Commission, Jacques Delors, and including all 12 European Community central bank governors, published a report that set the basis of the current Economic and monetary union (EMU). The report analyzed the principal features and implications of building up an Economic and monetary union and proposed a three-stage approach to move towards EMU": Enderlein and Rubio (2014).

For Spain, leaving the imbalance of relative prices that had been reached after the first expansion of the real estate bubble that we have already analyzed in the previous section (1986-1989) was easy thanks to an inflation and devaluation mechanism. However, this time there was a foreign exchange pact behind, the ECU basket of currencies (first phase of monetary unification) that only subtracted, in an imperceptible way, some flexibility to the mechanism, which, as always, consisted in maintaining the nominal prices of the buildings as high as they had come during the last expansion, and let inflation rise, especially through salaries, restoring the equilibrium of domestic relative prices at internationally unrepresentable heights; then several devaluations restored the balance of external relative prices.

For the large population that did not travel abroad and remained within the country, these adjustment mechanisms did not directly affect them, or at least they did not notice it. Through this mechanism was also created an artificial image in which "housing prices never fall" (nominally), which is coupled with a perception of wage increases to balance relative prices.

The initial graph indeed shows a stabilization in the growth process of the housing price index, although rent certainly continued to rise, most likely driven by the Boyer Law that we have exposed, which liberalized rents and allowed strong price rises, further encouraging speculation.

3.1.1.1.3 *The Great Bubble's explosive rise (1998 - 2006)*⁸²:

This is undoubtedly the greatest golden age of real estate speculation, collective euphoria and also the total abandonment of any kind of control in the spectacular rise in real estate and housing prices. Following the brief stabilization of real estate prices after the first explosive rise, prices began to grow increasingly after 1998 and they reached a climax around mid-2005; after this year they began to wobble until the total collapse spurred by the arrival of the US financial and real state crisis in 2007 - 08.

- (1) Spain entering the European Monetary Union: expansionary monetary policy, reduction of interest rates, cheap financing and cheap credit:

Among the last causes of the spectacular rise in housing prices that took place during this period stand without any doubt the massive influx of capital and cheap money that entered Spain thanks in great part to the artificially low interest rates set up by the ECB to, among other things, make the difficult reunification of Germany much easier⁸³.

When Spain joined the euro zone, interest and debt rates were higher than those of other Western European countries such as France and Germany; however, these rates were quickly

⁸² Already in the year 2000, Luis Ángel Rojo, who was president of the Bank of Spain and a reference economist in Spain - therefore, fully within the system and aware of it - warned of the increase of the construction sector in Spain, although at that time he was not yet aware of the crisis to which this incremental situation was going to lead Spain: "The construction sector in Spain has high shares in terms of both the total product, in constant pesetas, and employment, higher than those registered in the European Union average; and it has maintained them, approximately, in the whole of the period that we are examining, despite the wide fluctuations that are characteristic of this branch of activity": Rojo, Luis Ángel (2002).

⁸³ The years when Germany was the sick man of Europe: "The biggest economy in the euro area, Germany's, is in a bad way. And its ills are a main cause of the euro's own weakness [...] The numbers certainly tell a bleak story. German GDP shrank by 0.2% in the fourth quarter of 1998, against growth of 0.5% for the rest of the euro area. The figures for the first quarter of this year, which will be published next week, are not expected to provide much cheer. A few forecasters—albeit in the minority—think that the economy may have shrunk for a second quarter in a row, which would put Germany technically in recession. Any growth that is recorded is sure to be small. The government has scaled down its forecast of GDP growth for this year to 1.5%. Even that may be optimistic; several private-sector economists' forecasts go as low as 1%": The Economist journalist. The sick man of the euro. The Economist. Jun 3rd 1999, Frankfurt. <https://www.economist.com/node/209559> (Accessed 2018-05-23).

aligned right after joining the common currency as investors believed that Spain would now benefit from the same stability and economic prosperity as its euro zone compatriots. This caused interest rates to fall dramatically and a converge of interest rates to the German ones - which was considered the safest and most solid country in Europe from a monetary and financial perspective - in the whole Eurozone occurred.

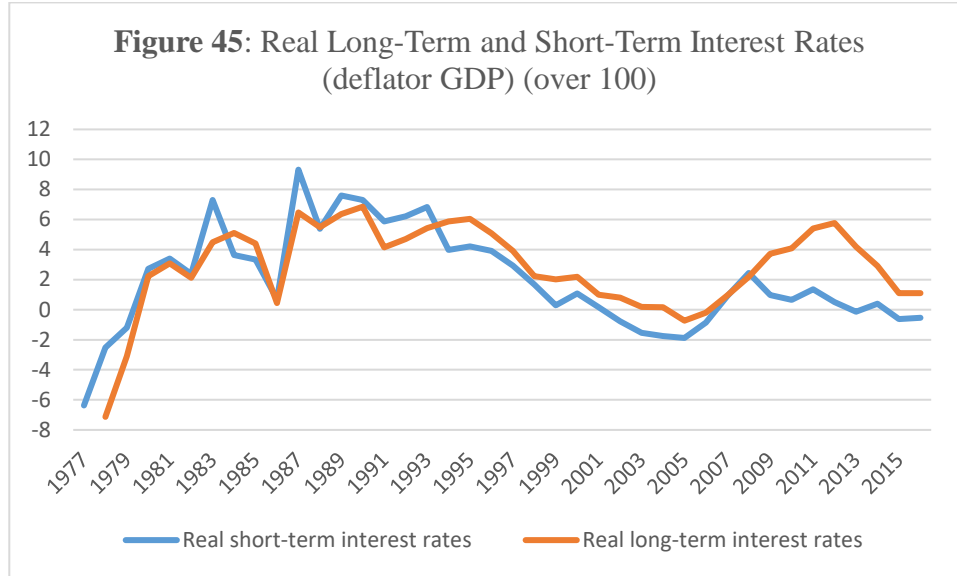
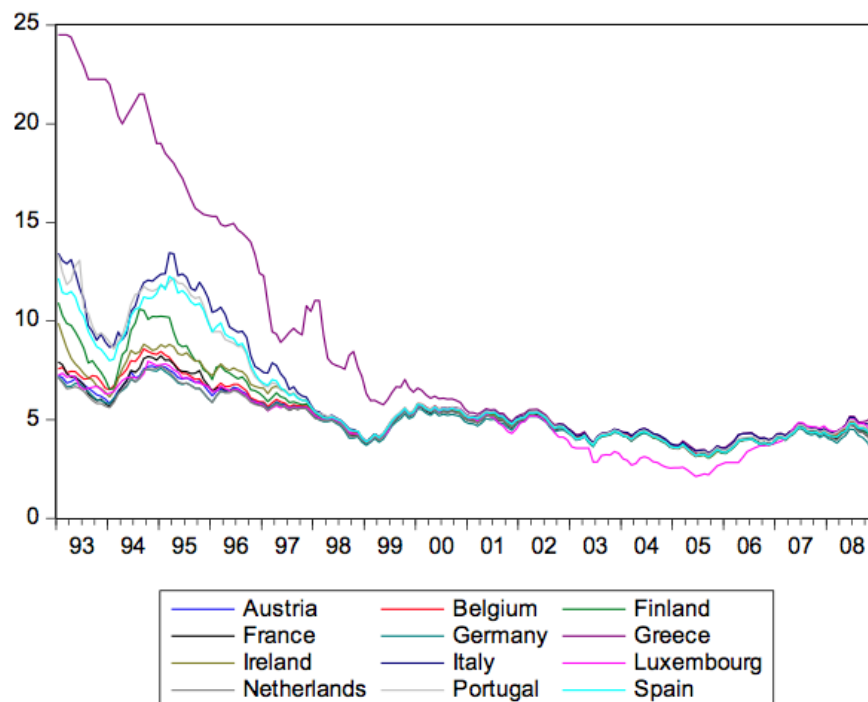


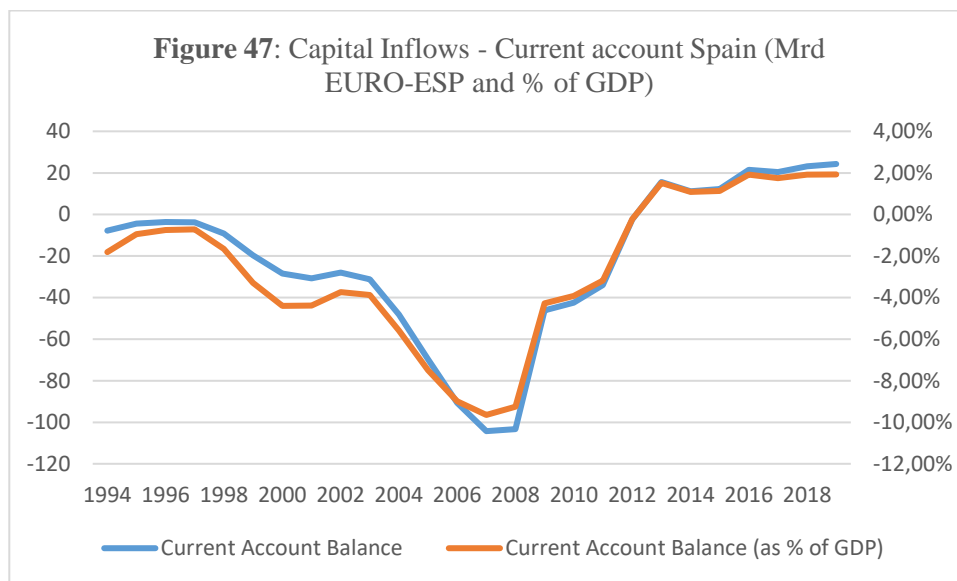
Figure 46: Long term interest rates on government bonds, according to Maastricht convergence criterion. Monthly data retrieved from Eurostat⁸⁴



⁸⁴ Diagram extracted from: Austrian Economics Center <http://www.austriancenter.com/the-euro-and-interest-rates-convergence-how-italy-and-greece-transformed-an-opportunity-into-a-tragedy/> (Accessed 2018-05-23). "[...] As it is clear from the graph that follows, the cost of debt was drastically cut down due to the fact that interest rate drops were huge in many European countries. This implied that some countries, in particular Greece, Italy, Portugal and Spain could save billions of euros every year as a consequence of this favorable external shock". I also recommend the reader to check figure 1 (Convergence in Yield for Government Bonds) in Villaverde et al. (2013) to see another figure on the same issue.

With interest rates falling, banks saw an opportunity to expand their business by targeting non-traditional customers who could now afford mortgages due to lower rates⁸⁵. In fact, during the first two years of this new Union, a group of member countries - including Spain – that had accessed the single currency area with real interest rates well above the average of the whole, found excessive slack in the common monetary policy implemented by the European Central Bank during the period⁸⁶.

Therefore, the euro, which helped equalizing interest rates all across the Eurozone, as well as the excessively expansionary monetary policy implemented by the ECB during the first 2000s, provided financial and credit conditions that helped inflate the Spanish bubble. Cheap capital arrived to invest in the Spanish housing sector, booming at that time. At the same time, regulation over Spanish banks was overlooked, and an important expansion of cheap credit – especially mortgages – increased demand, which in turned helped increasing prices and speculation. It was a cycle difficult to break, even more when it was somehow defended by the same European, but very especially Spanish, authorities.



This second period of expansion of the Bubble meant that a whole generation that reached maturity at the end of the 90s got hugely indebted when buying their houses or apartments at exorbitant prices, increasing private debt to levels never seen before. As we see in the previous diagram, almost all that money needed to finance bubble and to keep an increasing level of demand was borrowed from abroad⁸⁷ (and this massive inflow of cheap capital for investment is

⁸⁵ “When Spain entered the Eurozone, borrowing rates were higher than those of other Western European countries such as France and Germany; however, those rates quickly aligned themselves as investors believed that Spain would now benefit from the same stability and economic prosperity as that of its Eurozone compatriots. With interest rates falling, banks saw an opportunity to expand their business by targeting non-traditional clients whom could now afford mortgages due to the lower rates. Previously, banks had been limited to going after clients with college degrees whom typically made more money than the average Spaniard, independent business owners with long track records of success, and public sector employees whom benefited from a high level of job stability. The new class of clients however would include construction workers, restaurant employees, factory workers, and practically anyone with a job whose salary was high enough to afford the new lower rate mortgages that banks were now pedaling. Essentially, this meant practically anyone who was employed”. Durden, Tyler. The Creation Of The Spanish Real Estate Bubble. *Zero Hedge*. Thu, 01/18/2018 - 03:30. <https://www.zerohedge.com/news/2018-01-18/creation-spanish-real-estate-bubble> (Accessed 2018-05-23).

⁸⁶ To which we have to add the diabolical combination of the Dotcom Bubble and the "War on Terror", from the 2001-2002 biennium, which caused a situation that led to a general lowering of interest rates. To a first fire starting already in Spain, Greenspan helped to throw some oil.

⁸⁷ “With the common monetary policy, a new mechanism for the realization of transfers of euros between the accounts of credit institutions in the national central banks also became operational, which, by enabling an immediate

also intimately linked to a degradation of institutions, as will be seen in the sections below). This inflow of capital was even stronger in a country like Spain, traditionally weak on savings, a chronic importer of capital, and it led to one of the largest current account deficits in history⁸⁸.

At this stage of the bubble, a stage of euphoria and speculation, there was also a conjunction of different socio-psychological factors which help explain the process better⁸⁹ and how a large part of the Spanish population entered into the game, consolidating it and finally ended up suffering the worst consequences of the bubble burst.

(2) The “Wealth Effect” in the demand-side:

The speculative process takes advantage of the false perception of rising asset prices without pause that is created in the population. During this first bubble moment, the first group of people who sought to earn money were people who bought houses only to realize a year after that the values had increased in two digits or more and therefore the process of exponential profits was to buy right away in order to sell also right away, keeping the perception that prices were always going to rise and that this business was always going to bring benefits⁹⁰.

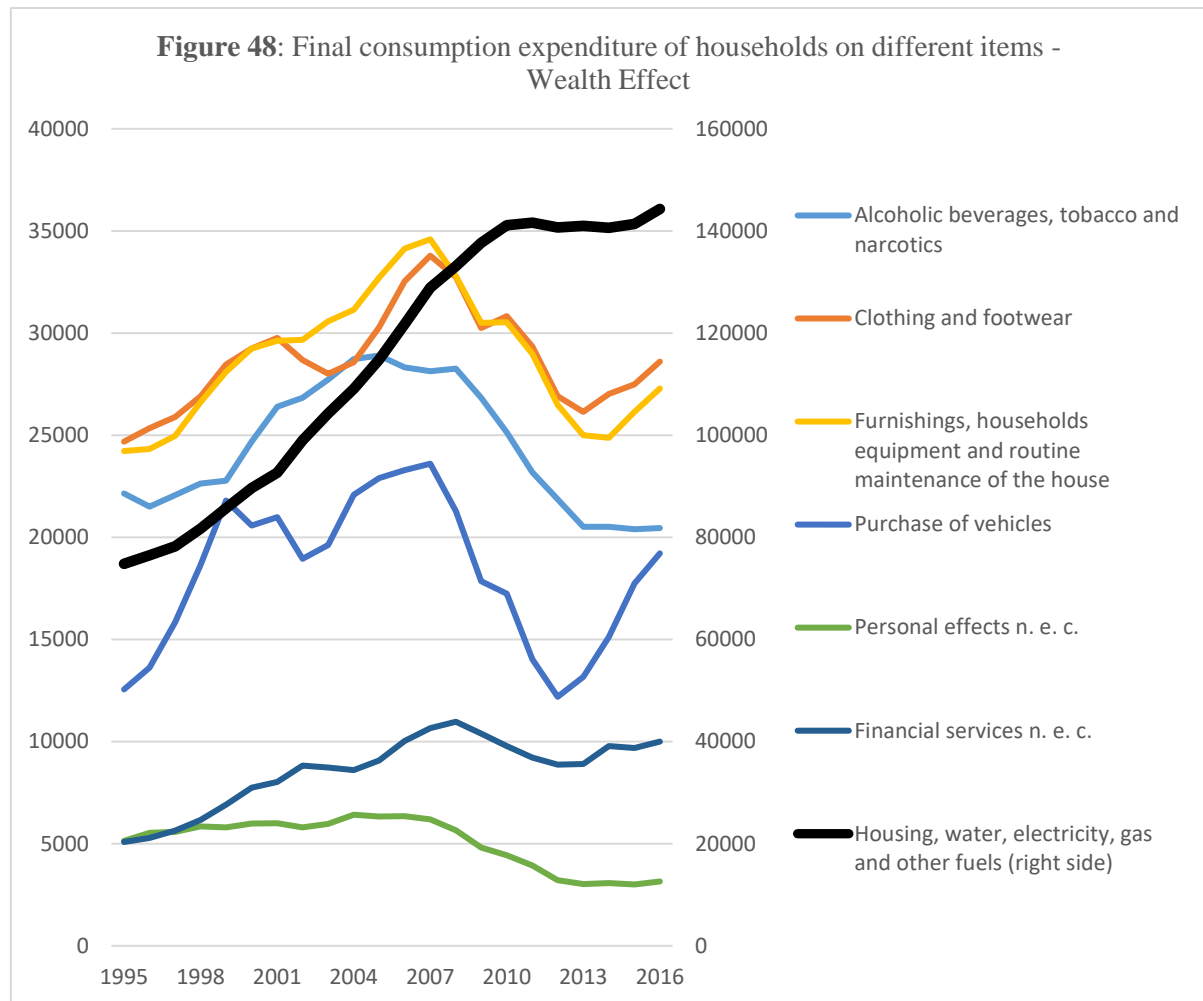
The graph shown below is very interesting because it shows how the "wealth effect" and the generalized bonanza that is breathed, although it was purely speculative, false, and without real roots in any substantial improvement of productivity or production factors, caused in the population a reaction of great increase in their expenses, derived from “investing” more and feeling every time “richer”. From 1995 to the mid-2000s there is an increase in the spending of families in many items and it is especially visual to see the large increase in the items related to the housing or construction sector, items that after the crisis have certainly diminished considerably or have stagnated. This "wealth effect", which had an unsound base, meant that the expenses of the families increased well above their real income, above what they could really maintain. At the same time, instead of saving, consumption was promoted, just to see how after the arrival of the Great Crisis of 2008 the Spanish economy and its families suddenly happened to be in an incredibly difficult situation, increasing and exemplifying a feeling of resentment and deceit that, although true, was also meekly accepted by many while it lasted.

mobilization of liquidity between the interbank markets of the Eurosystem, leads to the full integration of these in a single interbank market with a very short interest rate also unique for the whole area". Rojo, Luis Ángel (2002)

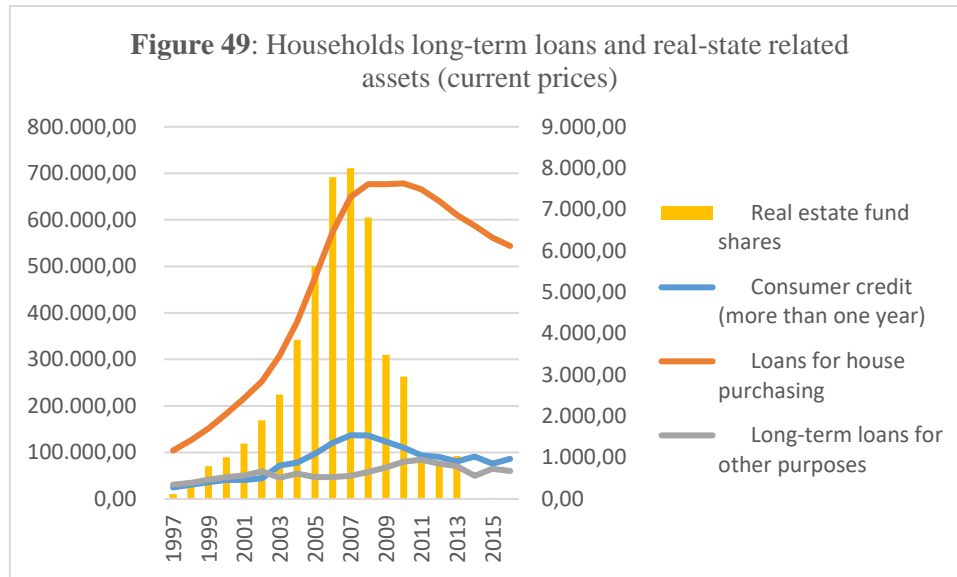
⁸⁸ Only surpassed by the US, whose account with the world is the one that corresponds to the power whose currency is the global supercurrency.

⁸⁹ For this part I invite the reader to check this article, which I certainly used as a great guideline: Durden, Tyler. The Creation Of The Spanish Real Estate Bubble. *Zero Hedge*. Thu, 01/18/2018 - 03:30. <https://www.zerohedge.com/news/2018-01-18/creation-spanish-real-estate-bubble> (Accessed 2018-05-23).

⁹⁰ All this perception is also consolidated thanks to the different television programs that show the great bonanza; thanks to the "investors" who have enriched themselves in a short period of time and with little effort; to politicians who affirm how well the economy is doing; to their own friends, neighbors or relatives who talk about their "business" and their incredible profits. All these stimuli help to create the bonanza effect that normally marks the beginning of a bubble when it seems that all those who "invest" in the asset of the bubble are enriched by doing so. The herd mentality would boost demand even more.



Much of the "wealth effect" in families, which was not directly related to an increase in real wages since they remained stagnant or grew very slightly, was financed with debt. The following graph is interesting to see that within the long-term loans item, the great majority account for mortgage loans, and within the assets, the most demanded were those related to the construction sector. A whole generation of Spaniards was financially trapped by the worst years of the bubble; when prices stopped growing and the crisis broke, the debts incurred still had to be repaid, although now in a situation of extreme economic weakness, with a very high unemployment rate and with real estate assets worth much less than before.

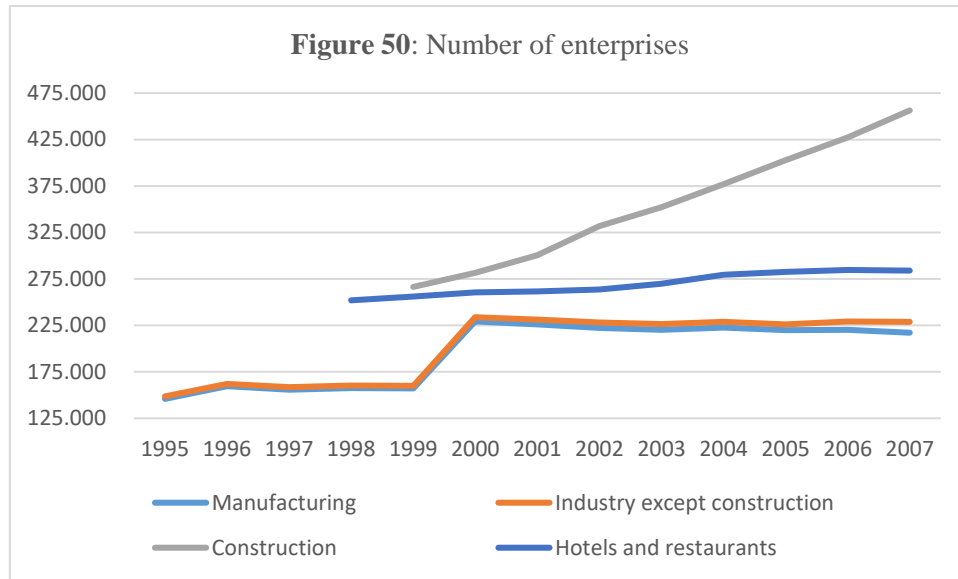


(3) The “Wealth Effect” in the supply-side:

The second group of people looking to make quick money were those who saw an opportunity to increase supply of housing and construction-related products in order to face the new explosion in demand. The existing construction companies could not afford to build enough to meet the demand, so the banks kindly intervened to offer them the same low-interest loans their real estate buyers got. These construction companies embarked on a massive construction boom financed by the same banks that would later offer mortgages to the buyers once the projects were completed. It really did not matter who they were, as the economy grew and the sector boomed, few measures were taken to avoid what later happened when the bubble burst.

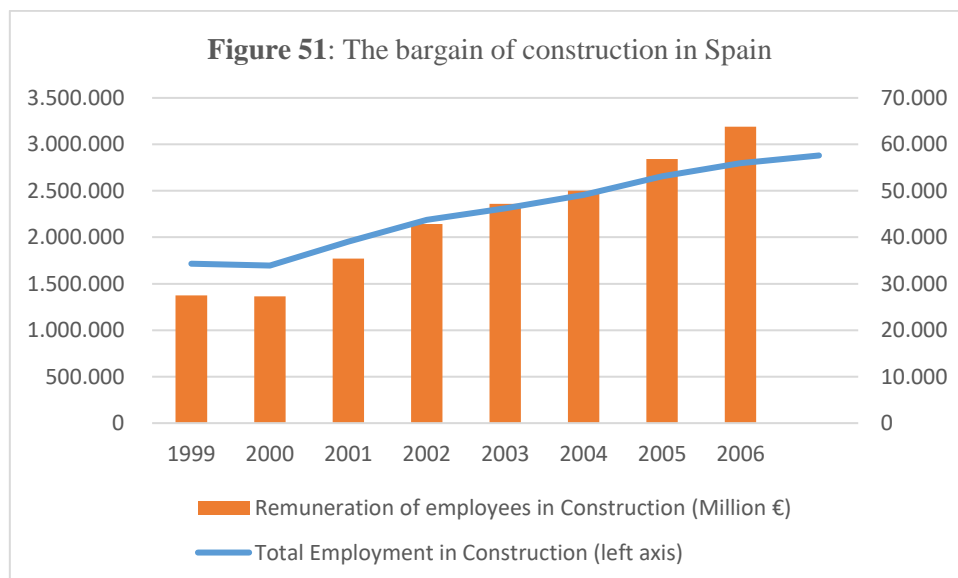
The following graphs show how during this time an increase in the creation of companies occurred and it was related, directly or indirectly, to construction, all taking advantage of the inertia of speculative wealth creation that was being brought by the increase in real estate prices and the constant demand of products related to the sector. The Great Real State and Housing Bubble and its increasing prices made prices in other related sectors rise, either directly or indirectly, such as in manufacturers of doors, windows, furniture, kitchens, appliances, etc. Their prices and profits also increased considerably during this period⁹¹.

⁹¹ “As construction picked up, however, building materials such as doors, windows, and floor tiles became scarce. Prices for these began to increase as well since builders needed them to finish their new homes before selling them. There are many stories of towns where a single factory would spawn a dozen or so competitors throughout the boom years. A perfect example of this was the town of Villacañas where around 60% of all doors in Spain were produced. Essentially, it would go like this: One factory would be producing a product and demand would increase significantly and so the factory would see record profits. Before long, the owners would begin to flaunt their wealth by buying luxury cars and homes, thus causing workers to take notice. A group of workers would then decide to pool their money together to open up a new factory producing the same product in the same town. They would then train new people to make the exact same thing, and then a group would splinter from the second company to create a third. The cycle would repeat itself until you had several companies in the same town making exactly the same thing. Construction companies would then know that town “A” supplied doors, town “B” made windows, town “C” made toilets, etc.” Durden, Tyler. The Creation Of The Spanish Real Estate Bubble. *Zero Hedge*. Thu, 01/18/2018 - 03:30. <https://www.zerohedge.com/news/2018-01-18/creation-spanish-real-estate-bubble> (Accessed 2018-05-23).



(4) The “Wealth Effect” in the employees⁹²:

With construction now booming, the unemployment rate dropped to levels that were virtually unknown in Spain. This caused that the wages increased in the sector and a new and strange phenomenon began to happen. Until then, university graduates had higher salaries than construction workers, but with the boom, construction wages were brought up, and as a result, a high school dropout student who worked in construction could get a starting salary that was usually higher and at least the same than the starting salary of someone with even more than a bachelor's degree. This, of course, led many high school students to leave and start working in this sector, instead of finishing their studies.



At the end of the real estate speculation process, Spain had a large pool of workers with low qualifications and almost no studies who were almost impossible to relocate to other sectors. In addition, after the Great Crisis, the government was not in a sound financial condition as to help with training programs adapted to that kind of labor force. The productive sector had also been too damaged to absorb so many people who had worked in the construction sector. This fact

⁹² “[...] at the peak, 25% of all male Spanish workers were employed in construction (Bonhomme and Hospido 2012)”, in Villaverde et al. (2013)

is very much behind the increase of unemployment, which turned chronic at very high levels relative to other economies and of very long-term duration. This levels, although now decreasing, have very much been maintained since then, far above other European economies.

(5) Massive inflow of immigrants: fresh oil to the fire:

This section will be analyzed more in depth in subsequent sections, when discussing the "productivity puzzle" and the influence that the composition of the labor force had on it during the 2000s, but now I will make a brief description of the process.

The increase in construction required a large work force that could carry out all of the projects that were being started. It seemed that no matter how many new workers were recruited, there was never enough to fuel the boom. With so many new construction projects, many wealthy and retired foreigners also began to move to Spain in droves from other parts of Europe to enjoy the weather and *livre* conditions, at the same time that they began investing in new homes, especially on the Mediterranean coast. This led to an increase in demand and an equally spectacular increase in prices, the offer - as we have just seen before - was also on the rise to take advantage of the boom and continued to increase profits. This was still at the beginning of the massive immigration initiative undertaken by the Spanish government⁹³.

In the early years of the boom, the demand had been so strong that new apartments and houses could easily be sold to Spaniards and foreigners looking for holiday homes or retirees. But as the boom advanced towards its later stages, it became clear that almost everyone in Spain who wanted a home and had a job already had one. The only logical thing the government could do at this point was to sell the new homes to the newly arrived immigrants in the hope of being able to maintain the demand sufficiently high to follow the same higher prices. At this point, the construction industry had overtaken tourism to become the largest industry in the country. If the largest industry in Spain collapsed, the country would suffer an economic crisis of epic proportions. Through the incorporation of new immigrants, two issues were solved: (a) new consumers to help grow demand – especially demand for houses – and, thus, the economy; and (b) new workers to work in the construction sector – as many of the immigrants were low-skilled – to keep also increasing the supply of new houses and the rise in prices. The logic was somehow to employ immigrants in the construction sector selling to them the new houses that were being constructed. Any stagnation of demand, they thought, could be simply spurred by bringing more immigrants into the country.

(6) The perverse mixture of Local Governments⁹⁴, Developers and *Cajas*⁹⁵:

In addition to the easy credit, the charm of instant wealth and the immigration policy of open doors, there was also the role of the government in all of this, and this is probably the most perverse point in everything that happened. In fact, there were opportunities to step back from the edge, but for the most part, these were ignored for several reasons throughout the Bubble's course. In the case of Spain, the Great Real State and Housing Bubble is very closely related to local government – even more than to the general government – and to the association – of mafia

⁹³ "In 2000, there were just under 1 million immigrants in Spain, which represents approximately 2.2% of the population; a decade later, in 2010, that number had grown to 5.7 million immigrants, representing 12.2% of the population": Durden, Tyler. The Creation Of The Spanish Real Estate Bubble. *Zero Hedge*. Thu, 01/18/2018 - 03:30. <https://www.zerohedge.com/news/2018-01-18/creation-spanish-real-estate-bubble> (Accessed 2018-05-23).

⁹⁴ "While some factors like the drop in real interest rates, favorable demographics, hile some factors like the drop in real interest rates, favorable demographics, and the surge of immigration contributed to the start of the real estate boom in nd the surge of immigration contributed to the start of the real estate boom in Spain, political economy factors added fuel to the fi pain, political economy factors added fuel to the fi re with a self-reinforcing triangle re with a self-reinforcing triangle of regional governments, developers, and a type of savings banks called regional governments, developers, and a type of savings banks called *cajas*": Villaverde et al. (2013)

⁹⁵ I take the inspiration for the title and part of the content of the section from Villaverde et al. (2013)

character – between politics, the financial system – especially the *Cajas* – and developers – real-state moguls and business people tied to the construction sector –.

One key aspect that helped to bring the Great Bubble from its first stages to its total explosion was what Villaverde et al. (2013) masterfully explain in their paper on the issue:

“The fact that in 1997 the Spanish Constitutional Court gave regions nearly complete control over zoning, which had before relied on urban development plans approved decades in advance. The new rules adopted in most regions let private developers or landowners present to the city council detailed plans to build a whole area of a township. The township would usually receive payment in terms of lots or cash. Eminent domain clauses could be used to force land owners to sell to the developer at some “fair price.” If the city council approved the plan, the developers and landowners were not bound by any previous zoning restriction. With these changes in place, an entrepreneur could make millions of euros developing areas that had never been on the market before, with the approval of only a city council and the signature of a mayor. Widespread corruption followed. Moreover, since the city would also “legal” payments from the developer in cash or in lots, land development became an important revenue source for local authorities⁹⁶, which could use the new-found riches to finance public programs” (Villaverde et al. (2013)).

The role of *cajas*, which changed after the 1985 law that gave control of them to autonomic authorities and also after they were later allowed to expand outside their initial region of influence, became at this same time incredibly important⁹⁷. The key feature of *cajas* in this model was that they started channeling lending in an indiscriminate manner to real estate developers, at the same time that *cajas*’ boards of directors were ruled by politicians or people closely tied to local or regional politics, when not to central government, unions or politically-linked institutions⁹⁸. So as we can see, local politicians were objectively in charge of *cajas*, who channeled funding to real estate developers; at the same time, local politicians were also controlling the other wing of the equation: real estate permits for constructions. So they were, never better said, judge and jury⁹⁹.

The laws in Spain allowed banks to lend up to 100% of the cost of buying a property, which meant there was no down payment. This essentially allowed buyers without savings, and often unstable workers, to buy homes with 30-year mortgages. Some banks even offered 50-year mortgages in case the payments were considered too high. There was also no law that prevented banks from collecting outstanding loans from foreclosed homes, so that if the bank seized people’s

⁹⁶ Politicians in power also took large loans from banks or from the same *cajas* they directly or indirectly controlled to build prestigious projects for their constituents. At the end of the 2008 boom, Spain had more kilometres of high-speed trains built and under construction than any other country in the world, with the exception of China, which is a much larger country. There were also numerous airports built in cities such as Ciudad Real and Castellón by private investors who used government subsidies that after the crash were abandoned. Politicians certainly used these projects to promote themselves as visionaries and demonstrate that they could “do things” for the people. This helped them gain votes by keeping the focus on the new facilities and infrastructure while keeping silent about the costs, demonstrating the perverse “trickle down” corruption brought by the Bubble, which made (almost) everyone remain silent about it while it lasted.

⁹⁷ “By January 1st, 2008, Spain had almost 25000 *caja* branches, one for every 18000 inhabitants”: Villaverde et al. (2013)

⁹⁸ “Between 1995 and 2005, lending for construction and development went from 8% to 29% of GDP, and lending to households for housing purchases grew from 17% of GDP to 49% (Beltrán et al., 2010). This lending boom was accompanied by a boom in construction. The number of housing units built every year went steadily upward from 150000 in 1995 to 600000 in 2007. Prices also increased quickly: according to data from the Spanish Ministry of Housing, between 1998 and the peak of the boom in 2008, nominal housing prices increased by 175%, compared to a 61,5% increase in Spain’s consumer prices index”: Villaverde et al. (2013)

⁹⁹ In Villaverde et al. (2013) the reader can find well explained two great examples of financial institutions heavily trapped in the Great Bubble: Bankia and Caja Madrid.

homes because they could not pay, they still owed the mortgage. This led to a more reckless behavior on the part of the banks because they assumed that even if a client was prone to default, they could still get money from them by withdrawing the property and then using legal means to collect the unpaid loan.

Government revenues also skyrocketed since the boom. More jobs meant more people paying taxes. Higher wages also meant that people paid more in taxes. Construction companies and banks paid more taxes because they earned more money, and real estate buyers paid taxes for every property they bought. All this extra money reduced Spain's debt-to-GDP ratio to decade-low levels – even if debt was still growing in total terms, but less than GDP –; however, it was later shown how both the increase in GDP and in revenues was far from “normal” or build upon a non-solid basis. After the crisis, GDP and revenues plummeted, and debt skyrocketed.

In short, there are three fundamental factors that help to understand the speculation euphoria during this period:

- The entry of Spain into the euro and the expansionary and low interest rate policy of the ECB in the first 2000s, which provided Spain with easy credit, thanks also to the convergence of interest rates all along the Eurozone to those of the German bond¹⁰⁰.
- The massive influx of immigrant labor into Spain, which provided more labor and customers to the real estate sector
- The connivance in the best of cases and the direct relationship in the worst, of the regional, autonomic and municipal political system as well as the financial system controlled by it in the real estate speculation, and the conscious ignorance by the Spanish general government of the problems that could result for the Spanish economy if the Great Bubble burst. Politicians in Spain did not act when they had to, and when they did, they acted late and badly.

3.1.1.1.4 *The Great Crisis: Turning Point, Credit Crunch and Debt Overhang (2006 - 2010):*

As can be seen in the figure that appears at the beginning of this section, from 2005 - 06 a drop in the real estate price index begins to be perceived. Surely due to sheer electoral reasons - general elections in 2008 - many of the signs of weakness in the real estate market were ignored at best and hidden at worst¹⁰¹.

Although the real estate market in Spain was already weakening gradually, the catalyst was external: the collapse of the real estate sector in the United States, which precipitated the outbreak of the bubble in Spain. As we have shown and we can clearly see in the graphs, construction in Spain was based on the demand for speculative assets and not on the demand for sheer housing – people mainly bought to resell at a higher price afterwards – and, in addition,

¹⁰⁰ In Villaverde et al. (2013) we can find similar reasons to understand the causes of the Great Housing Bubble and the following Great Crisis: “The elimination of exchange rate risk, an accommodative monetary policy, and the worldwide ease in financial conditions resulted in a large drop in interest rates and a rush of financing into the peripheral countries, which traditionally had been deprived of capital [...] Ireland, Greece, Spain and Portugal were indeed able to borrow at German-level interest rates”.

¹⁰¹ Solbes, at that time Minister of Economy, held an electoral debate on economic issues against Manuel Pizarro, economic candidate for the PP, in 2008. At that time, in which it was known - at least in the informed circles - the magnitude of the real estate bubble and the weak situation to which Spain could be forced if it exploded, the crisis was consciously denied by Solbes, for obvious electoral reasons. Later on, he affirmed without hesitation how he did not do what had to be done, even if he knew what was coming: “Solbes, because of the allergy to interventionism, completely ignored the true cancer of that era: the real estate bubble.”: Inurrieta, Alejandro. Lo que no quiso hacer Solbes para pinchar la burbuja. *Voz populi*. 15.01.2018 - 04:00 https://www.vozpopuli.com/economista_ciudadano/quiso-hacer-Solbes-pinchar-burbuja_7_1099760016.html (Accessed 2018-05-23).

government policies and inaction allowed contagion to other industries, which led to the greatest economic crisis in the Modern History of Spain¹⁰².

At the end of 2007, the United States began to experience disturbing problems with the real estate market, especially in states that experienced massive booms in construction and prices, similarly to what happened in Spain, although the US economy was incredibly more diversified than the Spanish one. As interest rates began to rise for many new owners, some could not keep up with their payments and ended up with the foreclosure of their properties. This problem was, of course, exacerbated by the fact that millions of Americans had received mortgages with little or no adequate control. Investors began looking for trouble elsewhere and a crisis that began in the southern United States, spread north and finally made its way across the Atlantic.

Armed with the knowledge that subprime mortgages, especially those that were issued during real estate bubbles, would probably end in default, financial institutions, investors and governments began to look more closely at the areas where these same factors appeared. In a short time, Spain was the center of all trouble, a country with an enormous speculative process going on in the real estate and housing sector. Yet, the Spanish economy has made of construction almost its unique source of GDP, employment and government revenue growth, so the burst of the Bubble would have more long-lasting consequences than in other countries, like the US, where the construction sector, although important, was far from essential for the entire economy¹⁰³.

Following the panic, banks quickly stopped lending to unskilled buyers, turning down their previous behavior in order to minimize the harm. Yet, most banks and lenders in the real estate sector had engaged in high amount of risky subprime mortgages which put themselves into a troubling and very delicate situation. This lack of financing – credit crunch – was the main reason that totally made prices fall dramatically and the Bubble to burst, as buyers and speculative builders realized that they probably could not unload their properties at large profits anymore once no more credit was available to keep financing the process.

Fear in the finance sector, meant fear in the economy and in private agents, who also stopped consuming, as they were seeing prices collapse, GDP falling and unemployment skyrocketing as companies were unable to buy and sell anymore, not only due to a lack of credit to finance new projects, but also due to a contagious fear about the future. This fear also affected not only Spain or the US, but the majority of Western economies. In Spain, the impact was greater, having been dependent for a very long time on the construction market, which had become the engine of growth for the Spanish economy, as we've said. When the machine of growth stopped, the whole economy contracted enormously.

As can be seen in the initial figure in this section – house price index –, the period 2007 - 2012 represents a very important fall in real estate prices, having this fact an enormous impact

¹⁰² "The crisis has taken millions of jobs ahead. The number of unemployed has gone from 2.1 million in 2008 to almost 6 million, more than 26% of the population, and Spain has been at the head of Europe in the unemployment rate, second only to Greece. In addition, 37%, those who have been looking for work for more than two years, have lost the benefit. The INE has now registered 630,000 families who do not receive any type of income. A gigantic deterioration in living conditions that also extends to those who still maintain their jobs. Real wages (counting the effect of prices) have decreased by 7% in the last three years and real GDP per capita has returned to levels of a decade ago [...] Since the house of cards of the Spanish economy was blown up in 2008, the rate of citizens at risk of social exclusion and poverty - that is, those who suffer severe deprivation or live in households with sporadic jobs - has risen by 23% to 27%, according to the analyzes of the European statistical office Eurostat. Not even having a job guarantees getting out of the hole. The so-called "labor poverty" -the one that places those who work under that threshold- went from affecting 10.8% of the employed to 12.7% between 2007 and 2010, according to a report by the Alternativas Foundation": Maria R. Sahuquillo. 2008-2013: Balance de daños. *El País*. Madrid - 27 DIC 2013 - 21:28 CET https://politica.elpais.com/politica/2013/12/27/actualidad/1388176018_072390.html (Accessed 2018-05-23).

¹⁰³ For the US, big Banks – "too big to fail" – and insurance companies with strong exposure to the real estate and housing sector was the real troubling issue, as a bankruptcy of those companies in such a finance-based economy as the US could end up dragging the entire economy.

on the entire economy. From a social point of view, it also had a great impact, insofar as a large part of the population saw itself with dilapidated savings in homes that were no longer worth as before, but still having to repay high amount of debts taken during the heights of the Great Bubble.

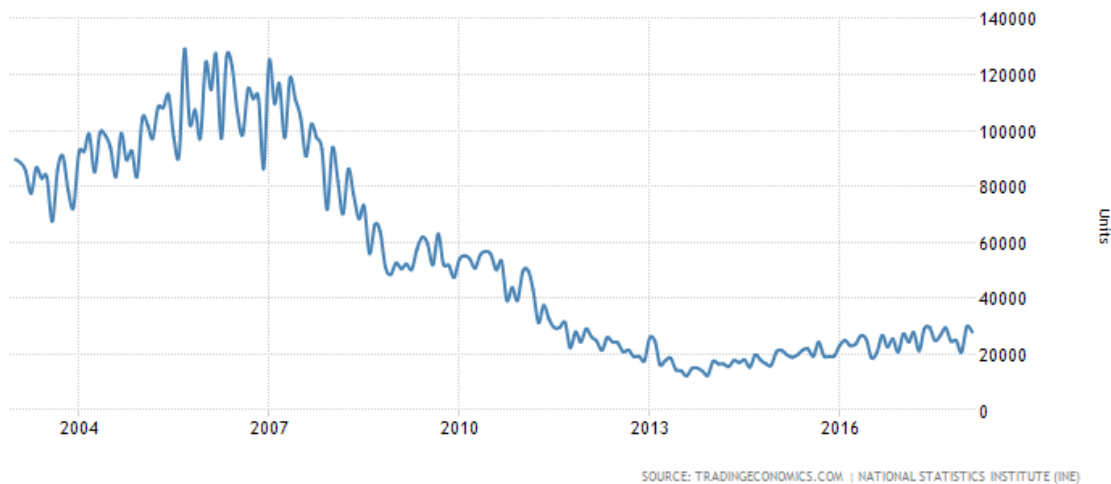
To better see the effect that the crisis had over the housing sector, the following graph shows the sales of new houses from the peak in 2007. As can be observed, new home sales fall almost without pause until reaching a minimum in 2016, where it stabilizes at a much lower level than those seen in the best years of the crisis.

Figure 52: Spain new home sales (source: Trading Economics)



The following graph is also interesting because it shows how mortgage loans increased enormously since the early 2000s, reaching a peak just before the crisis and then falling to a stable minimum around 2013. These two diagrams show how the burst affected the housing and construction sector and how previous indicators were completely “abnormal” based on the intrinsic demand, disposable income, economic model and situation, and population in Spain.

Figure 53: Spain mortgage approvals (source: Trading Economics)

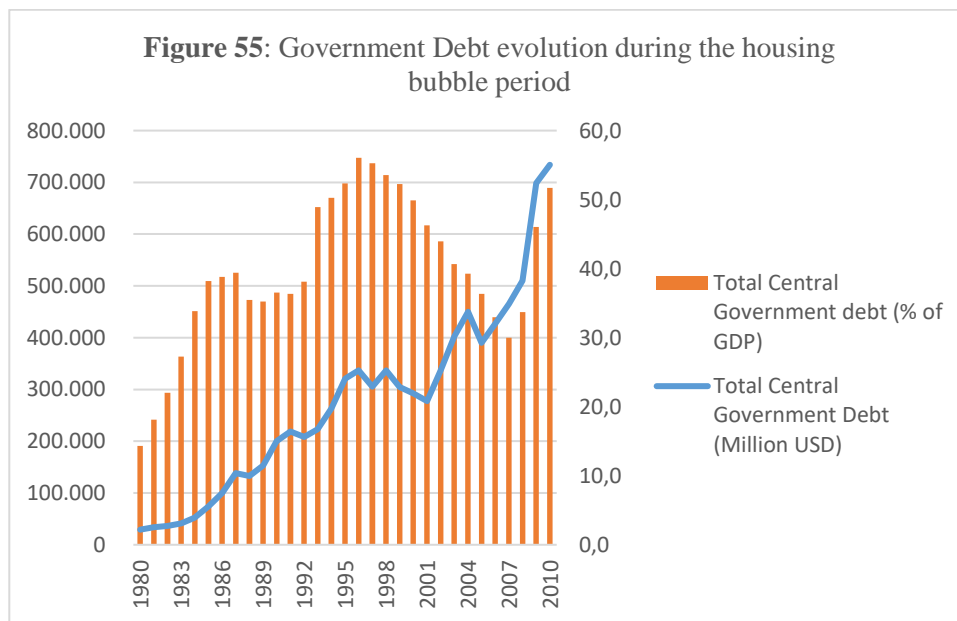


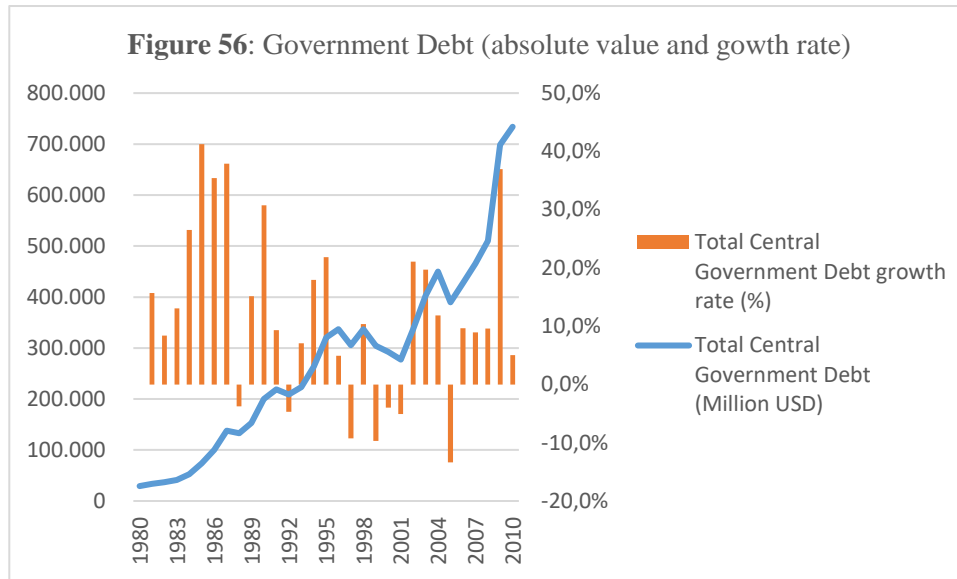
Another interesting fact to consider is the "home ownership rate". In the graph, this rate also falls after 2008. As it could be seen in the initial figure at the beginning of this graph, the rental rate falls less than the real estate prices and that may explain why many people decided to move to the rent - more affordable - after the financial crisis, when housing rents got stable while the real estate prices fell enormously.

Figure 54: Spain home ownership rate (source: Trading Economics)



The following graphs are interesting to perceive the influence that the bubble had on public finances. By looking at the trends shown in the graph, two main periods starting in the 90's – in the period of major extension of the Bubble – can be observed:



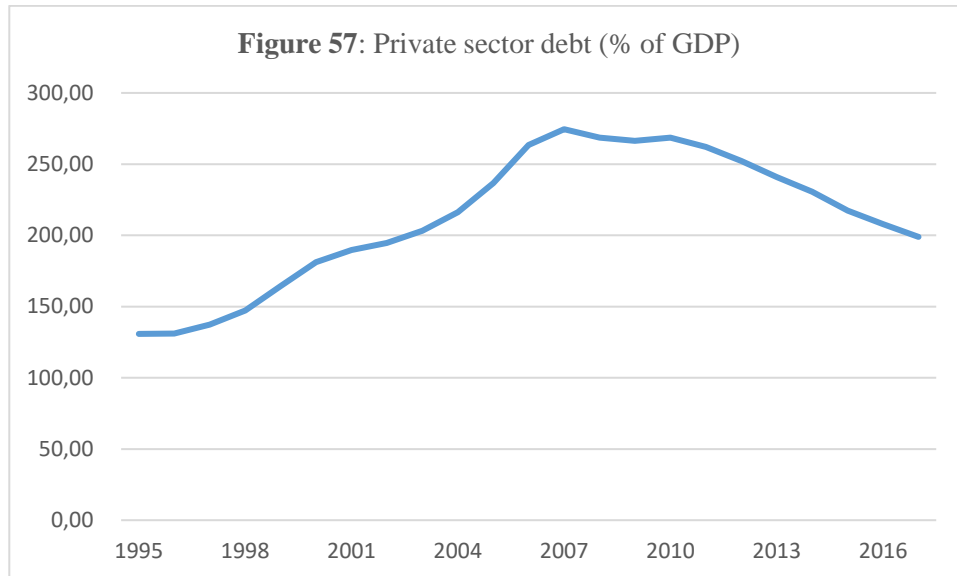


- **A period of debt reduction (1995 - 2007):** after a first period of high public debt at the beginning of the 90s, which coincides with a period of recession and weakness in the Spanish economy, the Spanish debt reaches a ceiling in the mid-1990s, that coincides with the change of government and with budgetary pressures to Spain to allow its entry into the euro¹⁰⁴; from then on, the government carries out a plan to reduce spending that allows reducing public debt. This reduction is greatly helped thanks to the huge tax revenues that were being obtained from the development of the bubble, and the savings in social benefits by intensely increasing employment and the wealth effect on families. In 2007, debt even reached a minimum of around 30% - 40% of GDP – depending the measure of debt taken –, even if GDP was an inflated GDP by the great importance that the housing bubble had over it. In addition, the reduction in public debt and in its % over GDP put Spain in a position of credibility and strength against international markets, especially at a time during which the German economy was suffering from economic weakness. This also greatly helped to further reduce interest rates and, therefore, was an encouragement to credit and financing opportunities, which were used to throw more wood into the fire of speculation.
- **A period of debt explosion (2008 - 2012):** just after the minimum level of debt over GDP reached in 2007, the global financial crisis heavily affected Spain and its Bubble finally exploded. At the outbreak of the global crisis credit markets contracted and this directly affected the real estate sector in Spain – through the “credit crunch” –. The crisis caused a huge fall in GDP, employment and tax revenues, which put the Spanish economy in great difficulty. In addition, just at the beginning of the crisis a fiscal stimulus plan (Plan

¹⁰⁴ “[...] the budgetary policy, which started, in its effort towards convergence, from a very difficult position, with public expenditures and a public deficit in the order of 46.5% and 6.5%, respectively, on GDP, adopted a more rigorous trend in 1995 and more disciplined after the legal and institutional changes introduced by the Popular Party government from 1996. Public revenues maintained, in the period 1994-1998, a gently rising trend in proportion to GDP - helped by that part of the income from privatizations (intensified in these years) that the European Union's norms allowed to be accounted for--; but the effort focused on the containment of public expenditures, whose percentage on GDP fell to 42% in 1998 and 40% in the year 2000. Thus, it was possible to meet the criterion of fiscal convergence - with a deficit of 2.6% of GDP compared to 3% required -, while a favorable combination of monetary policy and budgetary policy was achieved. The progressive approach to these results led to a substantial improvement in the expectations expressed in the long-term interest rates and in the exchange rate - whose respective convergence criteria were satisfied with convenience - in the behavior of wages - which tended to align with the inflation targets - and in the strengthening of demand and activity. All this made it possible for Spain to easily pass, in the spring of 1998, the examination related to the fulfillment of the requisites required to accede to the Monetary Union and that, agreed to the constitution of this by the European Council in the month of May, Spain joined the new single currency area, in a climate of strong expansion, on January 1, 1999”: Rojo, Luis Ángel (2002)

E) was carried out adding additional debt to the public coffers in a period of economic turmoil, and the structuralization of the crisis caused debt to increase enormously. In the graph we can see how from 2007 until 2010 debt escalated from around 40% of GDP to almost 60%. After the years it kept growing strongly every year, until reaching a disturbing 100% of GDP today, level at which it seems to have remained stable.

However, perhaps the most devastating effect that the real estate bubble had was over the private sector, where debt, as can be seen in the chart below, increased from 100% of GDP – an already fairly high level - in 1995, to almost 300% just before the outbreak of the crisis. This exponential growth of private debt is closely related to the intense wealth effect that the bubble had over a large part of the population.



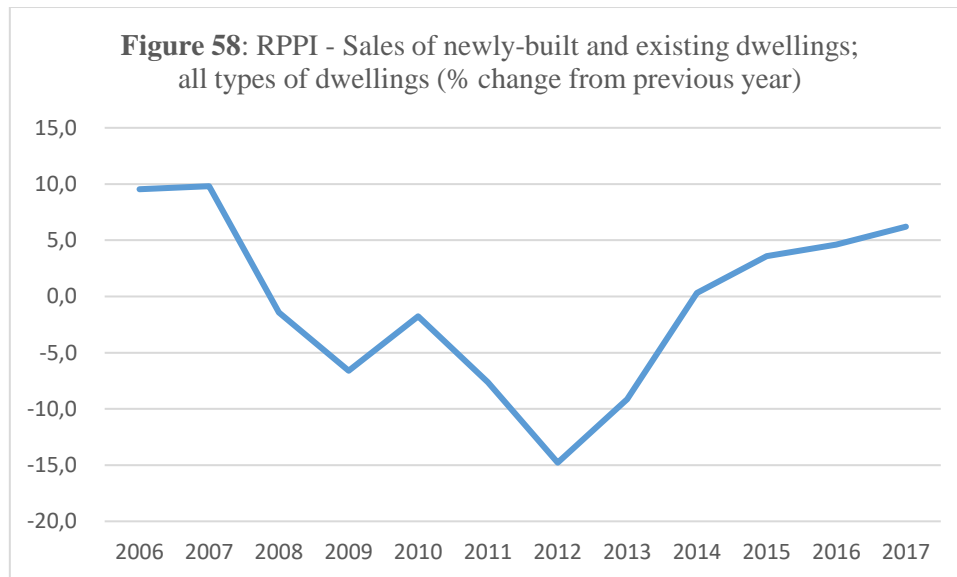
Therefore, several factors converged in 2008 to outbreak the Great Crisis in Spain. This crisis would lead to a situation of great weakness during at least the entire five-year period, that include the same crisis and bubble burst, the economic recession and the weak recovery. This recovery has been weak and it still weak despite some improvement almost entirely due to the fact that the Spanish economy was too over-dependent on the real estate sector. Some of those factors that came together in 2008 are:

- The high dependence (economic, fiscal, social) of Spain on the growth of the construction and real estate sector - see again the graph above shown on the growth of companies related to the construction sector during the period of maximum expansion of the bubble - and the explosion of the financial (and also real estate) crisis in the US in 2007 - 2008 that infected Spain and the rest of the world.
- The high dependence of Spanish families and companies on the wealth effect produced by real estate speculation, even if real salaries were not really improving, nor labor productivity.
- Many families invested their savings and earnings in the real estate sector which, when it failed, caused these families to find themselves in a situation of great economic weakness, having to face decreasing housing prices, constant-value loans and high unemployment rates. The very intense increase in private debt¹⁰⁵ – for the most part due to the increase in mortgage loans - caused that, when the bubble exploded, families found themselves in

¹⁰⁵ The housing bubble was also a huge shock for the Spanish financial sector. Banks like Bankia had to be rescued; many small and regional savings banks (*Cajas de ahorro*) went bankrupt and had to be merged or rescued; and in general the entire Spanish banking and financial system was very affected, greatly restricting credit in the following years.

a very weak financial position, creating a feeling of strong resentment on the economy and the government¹⁰⁶.

Yet, even after the bubble busted, a process of trying to recover higher levels of constructions – of “resurrecting” the construction sector¹⁰⁷ – seems to be put in place. After the crisis, we’ve seen a small rebound in prices and sales, even if they stay at low levels compared to the levels previous to the crisis. Notice also that the European institutions, when they agreed on giving the money for bailing out the Spanish financial sector, were very clear over the imperative need of not resurrecting any housing bubble again¹⁰⁸.



3.1.1.2 The bubble scheme: rationalize the irrational

By way of summary, a theoretical scheme that helps to understand the role and logic that housing played within the housing bubble is going to be presented below. This will help to rationalize the inflation process of the bubble using such a basic asset as housing and will put us in a position to better understand what happened. The key learning of how this process happened and developed is understanding it in order not to let it happen again.

¹⁰⁶ However, despite the huge drop in housing prices, rent, as can be seen in the initial graph, after the steady high growth since the early 80s, stagnated after the crisis but didn't fall as significantly as housing prices and still remains a very profitable investment, incredibly susceptible to some speculation. Let's take the following example to see how profitable it is: 1,000 euros/month of rent is 12,000 euros / year. What financial capital placed at 5% per annum gives an income of 12,000 euros/year? 240,000 euros that is roughly 300,000 dollars. But the market interest rates are zero. What financial capital placed at 0% per annum give an income of 12,000 euros/year? None. It can be seen then how profitable is renting an apartment or a house in Spain, still now. In fact, we could start talking, almost without fear of error, of a rent bubble, which has been in fact driven by another infamous law, the LAU-2013, where the tenant continues to lose rights in favor of the owner, who can also speculate with the rent thanks to the tourist rent and the massive source of people that tourism brings to Spain.

¹⁰⁷ “The absence of a classic vigorous rebound means the global economy never recouped the growth lost in the worst downturn of modern times. Historically, such V-shaped recoveries have served the useful purpose of absorbing excess slack and providing a cushion to withstand the inevitable shocks that always seem to buffet the global economy. The absence of such a cushion highlights lingering vulnerability, rather than signaling newfound resilience – not exactly the rosy scenario embraced by today's smug consensus”. Stephen S. Roach. Complacency Will Be Tested in 2018. *Project Syndicate*. Dec 14, 2017 <https://www.project-syndicate.org/commentary/test-for-economic-complacency-in-2018-by-stephen-s-roach-2017-12> (Accessed 2018-05-23).

¹⁰⁸ The European Union sent to Spain directly a Memorandum with the necessary economic policies to put the situation back on track, and the repression of the last remains of the bubble was the priority: not to resuscitate the dead model.

The Great Bubble theoretical scheme¹⁰⁹ can be exposed in the following way:

a) Housing is, at the same time:

- A durable basic consumption good; and
- An investment good.

b) Housing materializes savings better than money. It is:

- A safe investment;
- A profitable investment; and
- A liquid investment.

c) There are four housing rents:

- For using the asset, presumed income;
- For letting other use the asset, rent;
- For holding the asset, latent capital gain/loss; and
- For the transmitted ownership, realized capital gain/loss.

d) There are two types of demand

- For rent of the asset; and
- To buy the asset.

e) There is a reason to rent:

- To live.

There are three reasons to buy:

- To live;
- To pass (*para pase*); and
- To rent.

f) The price of the asset (housing) depends on the demand for purchase to live and for pass.

g) The more wealthy people are, the lesser demand for rent and the more demand for buying to live and pass, and the higher the prices.

h) Rising prices → Wealth Effect → Rising prices.

Basically this short theoretical scheme put into place first of all the role of housing in an economy, which is an asset used mainly to live, thus essential for everyone. The key point in order to understand the process of Bubble creation is seeing how using an asset that everyone needs – and hence an asset for which there will always exist some demand – you can create a Wealth Effect where the more people buy, the higher the prices, and the higher the prices, the higher the Wealth Effect of people and their willingness to buy. Somehow it is a Ponzi scheme that can work for some time but as the number of houses that can ultimately be built is not infinite, and as people

¹⁰⁹ I'm taking this entire scheme from Internet user "pisitófilos creditófagos". Developed and exposed in: Transición Estructural. Entries about Internet user "pisitófilos creditófagos". Internet Forum. <https://www.transicionestructural.net/index.php?topic=1213.2280> (Accessed 2018-05-23)

won't be able to afford a certain price finally, the Housing Bubble is a perverse scheme bound to fail in the end as it certainly happened.

3.1.2 The Minotaur State: inflated and inefficient administration, unaffordable pension (and welfare) system and ruinous autonomic regime

Another of the most disturbing economic problems of Spain, intimately related to the Great Real Estate and Housing Bubble, its subsequent explosion and the arrival of the Great Crisis, is and it has been without any doubt an equally similar explosion of public spending and a considerable increase in taxes and the Administrative State. Since the beginning of the 60s, the Spanish public administration has been growing gradually but constantly - often for electoral and political reasons - until reaching unsustainable levels in the long term.

In this section we are going to deal with a specific issue; namely: the excessive growth of the public spending and the unsustainability of public finances. From a present perspective, but especially from a future one, this issue is fundamental and remains one of the greatest economic problems of the country, having a direct impact over the private economy and the potential growth of it as well. This is especially true after the outbreak of the Great Bubble, which has led to a considerable increase in debt and a significant but not sufficient or effective cut of many public items that were not sustainable previously to the crisis. For the analysis carried out in this section, I will divide the analysis into the three big parts related to the Administrative State:

- (1) The Public Administration and the Welfare State, which although being still smaller than in other European countries, are oversized for a country like Spain, with low productivity growth, a weak productive and economic model and a decreasing population. Besides, in other countries where the Welfare State accounts a higher percentage over GDP, it still remains of higher quality, more efficient and usually better distributed. Within this section, three factors are especially important to analyze the unsustainability of the system:
 - a. Public Spending
 - b. Public Debt
 - c. Public Employment
- (2) Pensions, which are the most important item quantitatively and probably also qualitatively within the Spanish public budget and which, given the current conditions of the Spanish economy and population, are not sustainable if they remain as now *ceteris paribus*.
- (3) The Autonomic Model of territorial organization, which remains the greatest black hole of the Spanish economy and the primary source to explain this inconsiderate increase in spending and the administration, as well as in the number of staff, inefficiency. The autonomic model, especially through the control of regional *cajas*, is closely linked with the Real Estate and Housing Bubble – as we already saw –; besides, it contains a perverse centrifugal character leading to the destruction of the State and, more worryingly, the Spanish Nation.

3.1.2.1 The administration as a totalizing entity: ever-increasing Welfare and Administrative State.

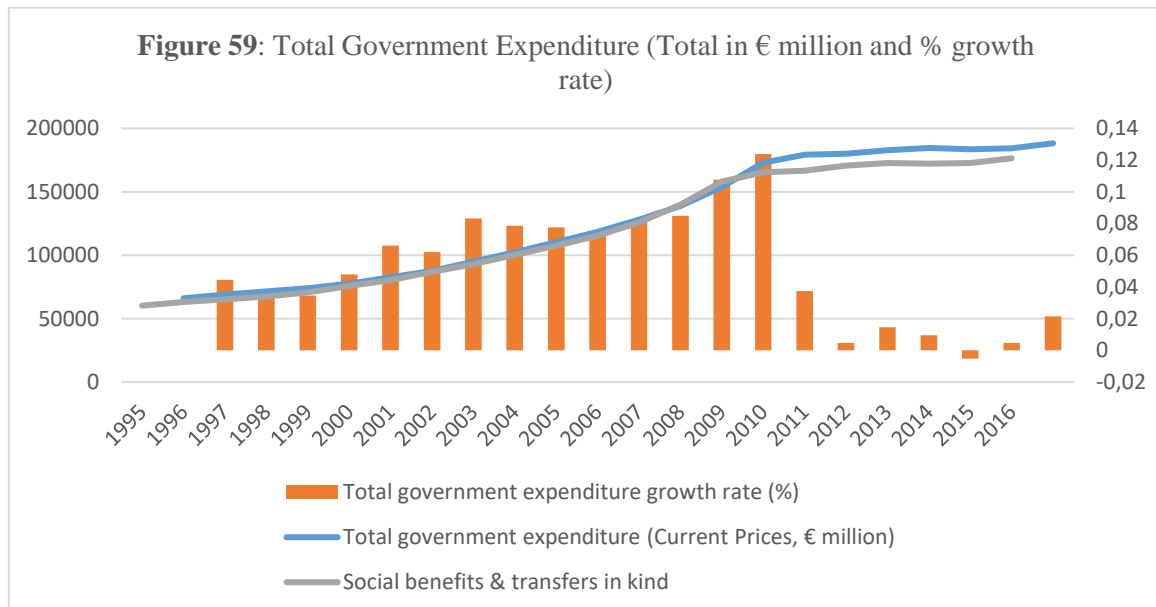
The graphs below help to understand three essential aspects in relation to the Welfare and Administrative State, especially in recent years, those of maximum expansion of the Great Bubble and those of the Great Crisis:

(1) Total Government Expenditure: excessively high and constantly growing

During the golden years of the Great Bubble (1995 - 2007), there was a moderation of public expenditure in relation to GDP, although it still increased in absolute terms on a year-on-year basis. The moderation in relation to the GDP was, first of all, due to a policy of containment of spending – based largely in a condition for the entry of Spain into the euro, and partly as an ideological premise of the conservative government in power during that time -, but, secondly and more importantly, it was a consequence of a particularly buoyant GDP thanks to the artificial and speculative development produced by the Great Real Estate and Housing Bubble which brought exceptionally high tax revenues thanks to the situation of the economy in the period of euphoria.

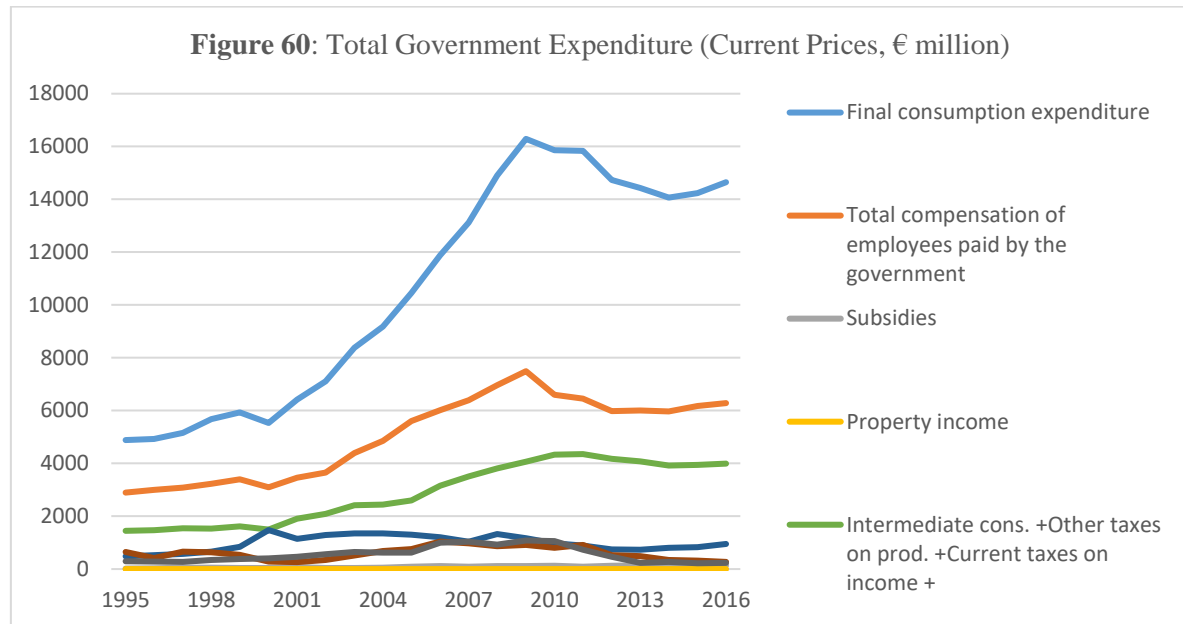
Since the Great Crisis of 2008 (2008 - 2015), government spending in relation to GDP has soared, largely due to the considerable fall in GDP and in tax revenues, as unemployment skyrocketed, as well as debt and interests on debt. More recently (2015 – 2018), spending and spending growth are more moderate, even decreasing in 2015, mainly due to the slight recovery of the economy and the stimulus driven by the ECB, although still at very high levels in relation to the pre-crisis ones. This has been a direct consequence of the considerable increase in debt as a result of the crisis and, also, a consequence of austerity measures forced from the outside – especially from the ECB and the European Commission – but also from within in order to sustain the Spanish economy and as a counterpart to the monetary expansion policies implemented by the ECB. Yet, 2018 is still a year of spending increase, and the outlook is that for electoral reasons and the inertia of the State in Spain, this spending may start to increase from the already high levels.

Below you can see the increase in public government spending in absolute terms and their growth rates. Spending increased during the boom years - contrary to what the countercyclical fiscal policy would recommend -. After the crisis, spending had at least to moderate its growth, for the most part due to the objectively weak situation in the Spanish financial and economic areas, but also around.

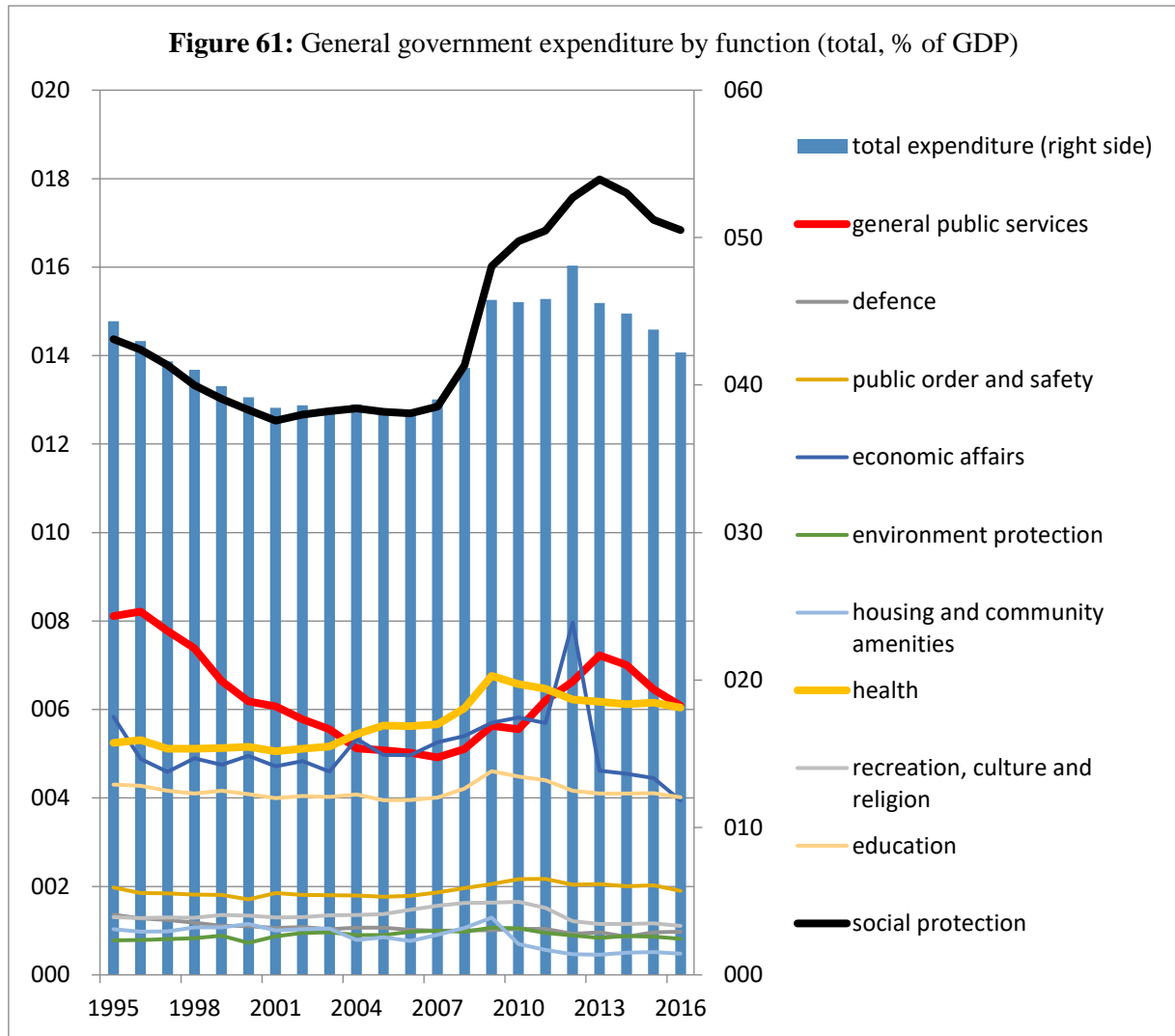


This second graph is interesting to see the increase in the different expenditure items. It can be seen how, after "social benefits & transfers in kind" - which is the government's first public expenditure item (see graph above) -, "final expenditure" and "total compensation of employees paid by the government" are second and third. It is evident that in Spain the State maintains an

important presence in the economy, especially as a socially redistributive entity and as a final consumer. Therefore, the role of the State itself during the Great Bubble and the weakness of the Spanish economy after the bubble busted is better understood.



In percentage of GDP, the numbers are somewhat different. As we have said before, there is moderation of spending over GDP in the years of expansion of the Great Bubble – that boosted GDP, as well as employment and tax revenues - but after the Great Crisis and the fall of employment, GDP and fiscal revenues, public spending over GDP increases considerably, only moderating during the post-crisis recovery. Yet, it still remains at very high levels.



Once again, we can see how the most important item is "social protection", which amounts around 18% of Spanish GDP in 2013. This item is followed, although far from it, by "Health" and "general public services". In the worst years of the crisis (2009 - 2010), public spending came to be of the order of 55% of GDP, only to decrease to 50% afterwards, where it has stayed.

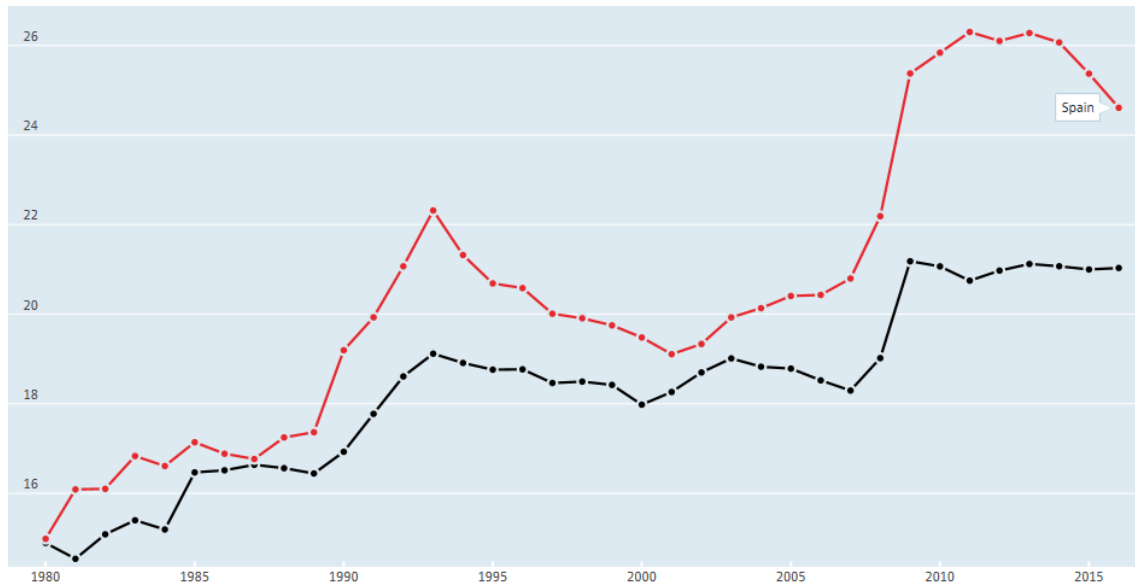
Therefore, by observing these diagrams we can see how Public Spending has risen considerably and still remains at very high levels. Besides, this spending is not invested for the most part in essential sections of the economy like Health or Education; so not even it grew at the same time that the economy was growing – being pro-cyclical –, but it was channeled to parts not productive or essential for the future healthy growth or sustainability of the country¹¹⁰. Public spending right now goes mainly to the social benefits - unsustainable in the case of pensions as will be seen later - or to government consumption, public services and the increase of the state workforce - as will also be seen later -. Public spending, seen under a historical perspective, has kept growing constantly throughout the last decades, especially since the very low levels in the

¹¹⁰ Items that since 1975 have not increased as significantly as others, even though they are essential for the development of the Nation: "In 1975, public social expenditures stood at 17.5% of GDP - social security, 9.9; Health, 3.7; education, 3.9 per 100--; in the year 2000, this proportion reached 22.4% of GDP - social security 13.0; health 5.1; education 4.3 per 100-". Rojo, Luis Ángel (2002)

late 60's¹¹¹. Its long-term unsustainability is also a cause of the high levels of public debt in the Spanish economy, an issue that will also be discussed afterwards¹¹².

Finally, if we compare social spending¹¹³ in Spain with other nations, we see that there has really been a high increase in the last years, certainly much more than in other countries¹¹⁴, even though the values over GDP can still remain lower than the values in countries like France and Germany, which are worth remembering, are states with tax collection and productive system stronger than the Spanish one.

Figure 62: Social Expenditure (as % of GDP)

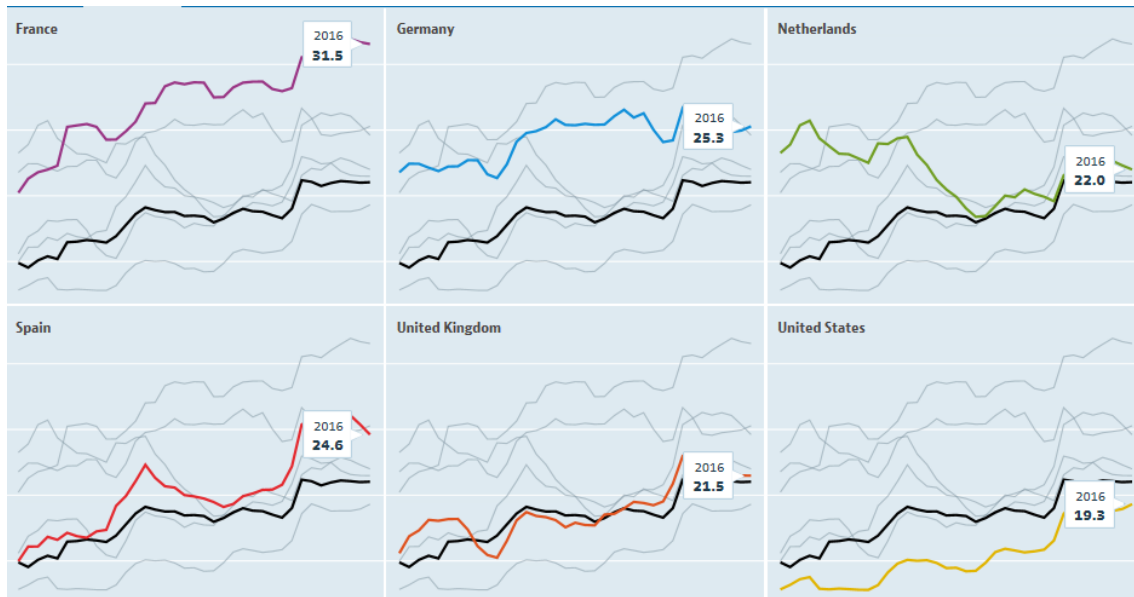


¹¹¹ This article is especially recommended to see an extensive analysis through graphs of the fiscal macroeconomic variables of Spain from the early 60s to the present: Esteve (2016). The considerable increase over the decades in relation to GDP can be seen - with the exceptional moderation in the Great Bubble period - and its elephantine increase since the Great Crisis of 2008.

¹¹² I recommend the reader the following article to see some graphs comparing public expenditure in Spain relative to other countries: Rallo, Juan Ramón. Mucho más gasto público que antes de la crisis. *El Confidencial*. 26.07.2017 – 05:00H https://blogs.elconfidencial.com/economia/laissez-faire/2017-07-26/mucho-mas-gasto-publico-que-antes-de-la-crisis_1420660/ (Accessed 2018-05-23). The reader can see how public expenditures in Spain have increased through the crisis, as we have shown.

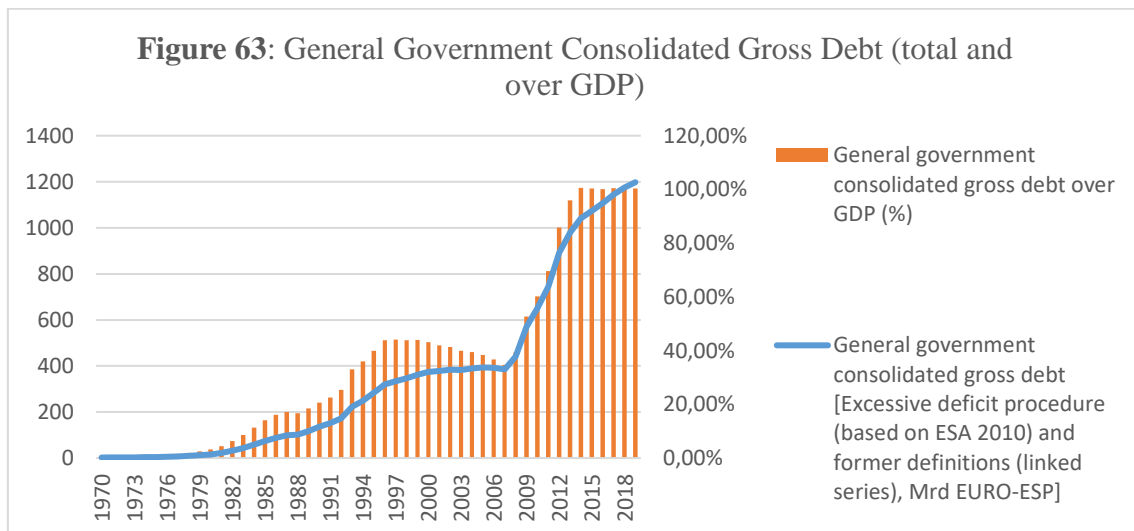
¹¹³ Data extracted from OECD's data base. "Social expenditure comprises cash benefits, direct in-kind provision of goods and services, and tax breaks with social purposes. Benefits may be targeted at low-income households, the elderly, disabled, sick, unemployed, or young persons. To be considered "social", programmes have to involve either redistribution of resources across households or compulsory participation. Social benefits are classified as public when general government (that is central, state, and local governments, including social security funds) controls the relevant financial flows. All social benefits not provided by general government are considered private. Private transfers between households are not considered as "social" and not included here. Net total social expenditure includes both public and private expenditure. It also accounts for the effect of the tax system by direct and indirect taxation and by tax breaks for social purposes. This indicator is measured as a percentage of GDP or USD per capita": Social Spending data. *OECD Statistics* <https://data.oecd.org/socialexp/social-spending.htm#indicator-chart> (Accessed 2018-05-23)

¹¹⁴ It is partly explained by the "delay" of the Spanish Welfare State compared to other European countries. However, the "progress" has been so great and intense that we have almost taken the lead in many issues: "While most European countries have reinforced, expanded and structured social security policies and systems since the end of the Second World War, the Spanish social protection regime had dragged a deep delay: it was short in its benefits, heterogeneous and limited in the contingencies covered, it did not respond to a system and was far from the interpretation of the principle of universality. In the mid-sixties the universalization of social security had begun and expenses in the economy and education had been increased, the proportion of public expenditures in GDP in Spain was, in the mid-1970s, scarcely half as much of the corresponding proportion in the average of the countries of the European Economic Community": Rojo, Luis Ángel (2002). However, since then and as we have said, it has grown enormously.



(2) General Government (Gross) Debt: unsustainable post-crisis increase

The unsustainability of public spending is intimately related to the unsustainability of the debt levels of the Spanish economy. With government debt has happened something very similar to what has happened with the public expenditure that I have shown before: following a continuous and constant growth from the low levels of the early 60's¹¹⁵, public debt only moderates - in total terms - and even decreases - in terms of GDP - in the decade of the Great Bubble. However, and as I explained before, this moderation is very likely the result of higher GDP, employment and excessively high tax revenues thanks to the Great Bubble. After the Great Crisis of 2008, debt increases inconsiderately: from a minimum of around 40% of GDP to being currently close to 100% of GDP.

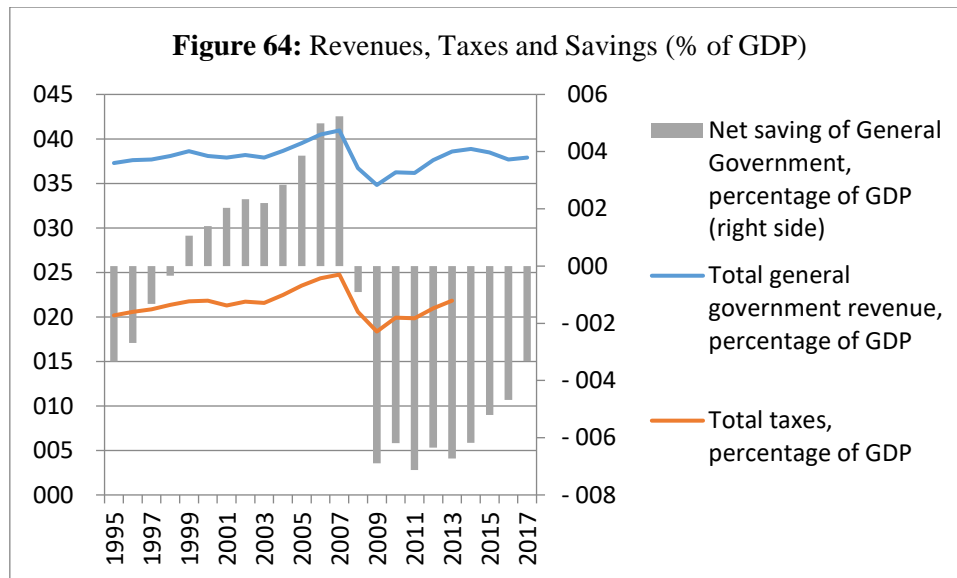


This financial position of the Spanish economy is unsustainable based on three factors:

- The large increase in Public Expenditure and how it has stayed at very high levels (as seen before).

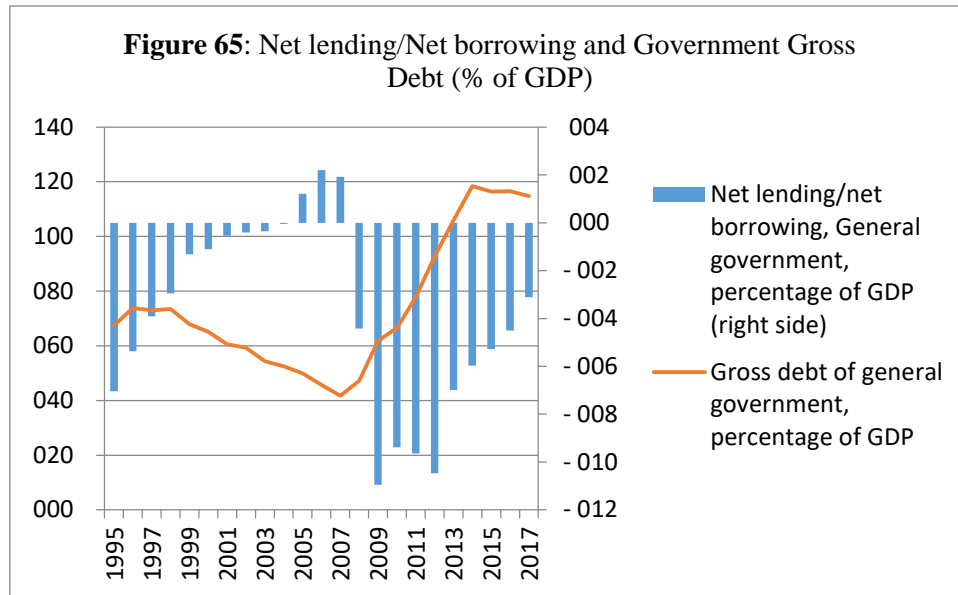
¹¹⁵ Again, for the evolution of the Spanish debt in the last 100 years the reader can check: *Cinco Días*. https://cincodias.elpais.com/cincodias/2014/12/12/graficos/1418410740_043679.html (Accessed 2018-05-23).

- Stagnant fiscal revenues after the crisis, which means that government total revenues collected are not enough to finance this increasing debt and its interests given the current public expenditure in Spain and the Spanish productive system¹¹⁶. As can be seen in the following graph, fiscal revenues and the % over GDP of government savings experienced an increase in the era of speculative euphoria. As we have already said, this was a time of exceptional growth in tax revenues, employment and GDP. However, after 2008 everything changes, and the government's financial and fiscal position becomes incredibly weak, which shows how the period 1998-2007 was, in the end, a mirage that could not last over time, ending abruptly with the crisis.



- The historical and characteristic need of the Spanish economy for external financing and the deficit in its financial position. As can be seen in the following graph, the government's position was positive simply during the brief period of euphoria of the Great Bubble; after the crisis, it suffers a large deficit and a considerable increase in debt. This certainly makes totally unsustainable higher levels of public spending in an economy that already cannot finance those increases with more debt – unless it has the help of the ECB backing everything, as it has certainly happened –.

¹¹⁶ In fact, if Spain has been able to finance itself up to now and place its debt, it has been thanks, almost exclusively, to the help of the ECB. Spain has received funding for bailing-out its financial system and it is benefiting from ECB assistance, at least for now. "Spain used around €38.9 billion for bank recapitalization, under restructuring and resolution plans approved by the European Commission under state aid rules, and around €2.5 billion for capitalizing Sareb (the Spanish asset management company). Both the bank-specific conditionality and the horizontal conditionality included in the memorandum of understanding (MoU) were fulfilled as scheduled. After exiting the programme, the monitoring of the Spanish economy and its financial sector continues in the context of the post-programme surveillance (PPS), outlined in Regulation (EU) N°472/2013": Financial Assistance to Spain: Information about the EU financial assistance programme to Spain and links to related reports and other publications. *European Commission*. Until present https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-financial-assistance/which-eu-countries-have-received-assistance/financial-assistance-spain_en (Accessed 2018-05-23). Check also the following: "[...] The escalation of the crisis in the Eurozone calls for new measures to reduce yields on Spanish bonds. This column succinctly lays out the options and finds them wanting. It argues that sovereign bond purchases might not be sufficient to reassure investors. A credible solution will also require a coordinated strategy to address Spain's competitiveness problem": Delbecque (2012)

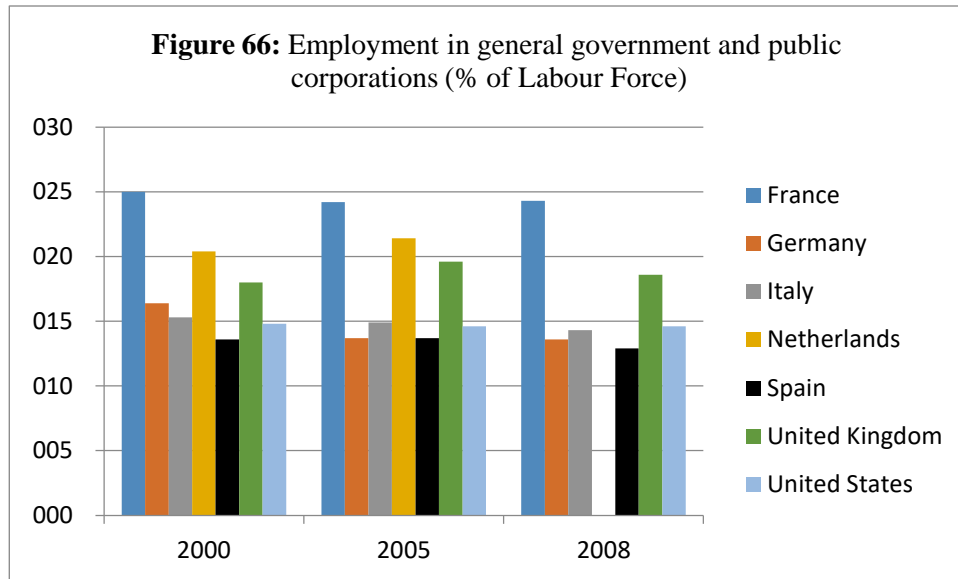


(3) Public Employment: the State as a (not always efficient or necessary) job creator

As we saw above, in absolute terms, the salaries of public employees is the third most important item of government spending. Although it fell after the economic crisis, it did not do so excessively, it has remained stagnant and an increase is perceived in the most recent years. As with public spending, public employment is often the result of political or electoral issues in Spain and, following the explosion of the Great Bubble and the collapse of the economy and employment, the government has recently attempted to relaunch public employment as a way of increasing employment and as a way of political placement. Because, in a productive system such as Spain, as dependent as it was on construction and as dependent as it is still on services, public employment often becomes a tool for secure hiring and wage and labor stability, which ends up creating and consolidating a "civil-servant mentality".

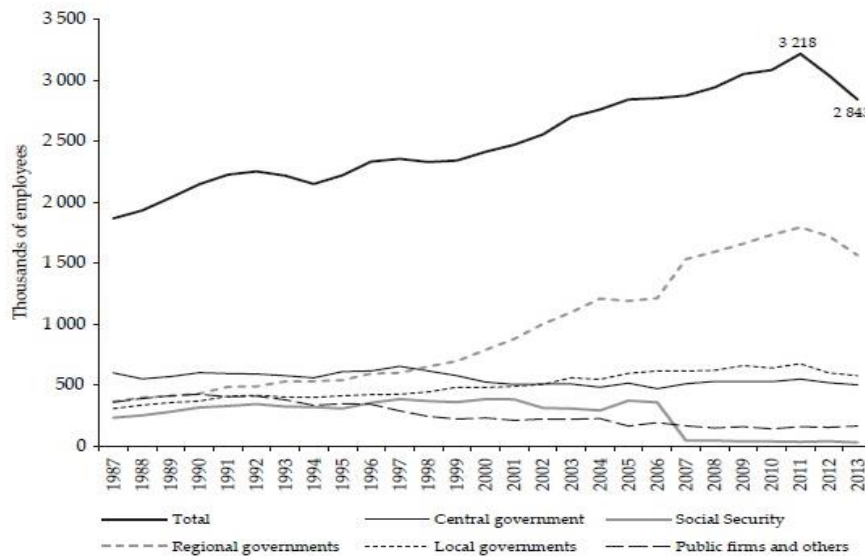
Yet, in comparison with other States - especially France, which is a unique case -, public employment in the central government in Spain is not excessively high, as shown below¹¹⁷:

¹¹⁷ Although in terms of public salaries, not only are they much higher than in the private sector, but they are also often higher than in other countries with higher per capita income than Spain: "In any case, comparing with France, Spanish public salaries cannot be said to be low: in France a teacher starts with € 24,000 per year and retires with € 38,000; in universities, where there are establishments segregated by category, something that the Spanish unions would never tolerate, the fork ranges from € 21,000 for an entrant in the worst universities to € 60,000 for a first-class "veteran", with possible complements of up to 25 - 31,000 € in exceptional cases of international proven worth. The comparison of any body, from autonomous police with Gendarmerie to judges or tax inspectors, generally gives an advantage for Spain although the average salary is more or less the same (in France, for example, there are many officials in low and very low categories charging the SMI or little more)": Álvarez (2016)



However, we do see a considerable increase in employment in the public sector in the regional and especially autonomic government in Spain - and we will deal with this issue later on -. In the following diagram¹¹⁸ the increase in employment in the public sector in Spain in recent years can be seen, a constant and continuous rise despite the economic crisis or the economic conjunctures - except after the Great Crisis, when it decreases -.

Figure 67: Evolution of public sector employment in Spain (1987 – 2013, 2nd quarter of each year)



Source: authors' analysis from the Spanish Labour Force Survey.

¹¹⁸ Extracted from Antón and Muñoz de Bustillo (2015), where interesting conclusions regarding salary differences between the public and private sectors are also presented: “The first one refers to the existence of an average positive premium to public employment. Nevertheless, this gap concentrates on low-skilled workers, whereas very qualified employees in the public sector face a penalty with respect to similar individuals employed in the private economy. In the second place, we have found that the extent of the gender gap is smaller in the public sector and the incidence of a glass-ceiling effect is much more blurring than among private employees. Third, we have explored the particularities of the Education and the Human Health and Social Work sectors, where the public and the private economy largely coexist. The most remarkable result has been the much lower importance of the public sector premium in the former activity. Finally, we have interpreted our findings in the light of the specificities —mainly, the labor market institutions— of the Spanish economy, arguing that the current process of downsizing of the public sector associated with the ongoing process of fiscal consolidation might have adverse effects on earnings inequality and widen the gender gap”.

By way of conclusion we can say that given the historical and current conditions of the Spanish economy, there are two major issues to be taken into account in relation to the Administration and the Welfare State:

- A sustained and constant increase in public spending, debt and the number of employees from 1960 until the peak reached in the late 90's and 2000's¹¹⁹. Except for a moderation in spending and debt over GDP in the decade of the Great Bubble - where employment, GDP and tax revenues were exceptionally high - these items increase considerably after the Great Crisis, remaining at very high levels and with no prospect of prolonged lowering.
- The unsustainability of such an enormous and wasted Administrative and Welfare State given the current level of debt, the fiscal policy, public employment, and the total revenues and spending of the Government. These factors certainly put Spain in an extremely delicate situation for the future and it may turned out to be an obstacle to growth and sustainable development of the economy in the future – and it might well be happening already -. The necessary increases of income needed to cover the incessant increases of spending will logically restrain the private economy¹²⁰.

3.1.2.2 *The long-term unsustainability of the public pension system: population, productivity, capitalization and income*

Pensions are one of the key issues in any analysis of the Spanish financial and economic future, especially the sustainability of its public finances. Although pensions are included in public spending, I preferred to separate it due to the enormous importance of the matter, both from an economic, social and political point of view¹²¹, hence the enormous controversy that raises any debate about it. Despite this, it is a recurring theme, important and of equal importance in many European countries, whose population pyramids are similar, although it is no less true

¹¹⁹ Especially in social spending, unemployment benefits and, above all, pensions: "In the transition and consolidation stage of democracy, the political climate and the economic crisis led to a very strong growth in social spending, which went from 17,5 percent over GDP in 1975 to 21.2 percent in 1981, driven basically by the advance of pensions and unemployment benefits; In parallel, the social contributions established to finance social security went from 9.2 per cent to 12.9 per cent of GDP between those same years. The rapid advance of social expenditures was a factor of first importance in the increase of the public deficit in the period while the high and increasing level of social contributions acted as an element enhancing labor costs": Rojo, Luis Ángel (2002)

¹²⁰ And not only I say it, Luis Ángel Rojo, the Spanish renowned economist also said it twenty years ago: "[...] The success of the general strike, the retreat of the socialist party in the general elections of October 1989 and also the error of who took the reduction of the deficit and the improvement of the public revenues resulting, to a large extent, from the economic expansion of those years as structural improvements and not merely conjunctural ones, ended up leading the Government to important assignments in social and welfare policy: strong improvements, in breadth and quantity, of pensions (contributory and non-contributory), the important extension of the coverage of unemployment benefits and the effective universalization of health were the main aspects of a very strong growth of public social expenditures whose combined weight on GDP went from 21.7 per 100 to 25, per 100 per cent between 1988 and 1993, contributing decisively to Evaluating total public expenditure up to its maximum level of 47 percent over GDP in the last year indicated. As desirable as the objectives were, the Spanish economy was not in a position to digest, without serious problems, such intense and rapid growth in social spending, as was shown when the bullish situation subsided in 1992": Rojo, Luis Ángel (2002). We are in a very similar situation today, after the Great Crisis of 2008.

¹²¹ Recently, and only tangentially related to this topic, although interesting from a general perspective of the system, an eminent professor affirmed how in Spain, the law is often a political short-term selfishness, and criticized the little intelligence of the legislators, in this case speaking of Tax Law, but it is related to the financing of pensions: "We have a legislator with very few neurons, and I do not speak only of the current one but also of the previous one, as much of the Popular Party as of the Socialist one". Juan Martín Queralt, Professor of Financial and Tax Law at the Faculty of Law of the University of Valencia, and who was dean of the same Faculty in Murcia, author of numerous publications in his specialty, speaks without restriction during his speech at the III Forum of the Forinvest 2015 Advisor, to which he was invited by APAFCV and Mapfre. See "Tenemos un legislador demente" Martín Queralt. Asesores Fiscales Comunidad Valenciana. Youtube. 15 mar. 2015 <https://www.youtube.com/watch?v=7rELYYX3RgQ> (Accessed 2018-05-23)

that in Spain, due to high unemployment and its own population pyramid, the problem is especially serious. In this section I will not make any in-depth explanation of the current pension system in Spain and how it works in detail¹²²; otherwise I will carry out an analysis of some key indicators that show how pension expenditure in Spain is particularly high and unsustainable in the long run given the financial position of the Spanish State and, above all, its numbers in terms of population and employment¹²³.

Very briefly, the public pension system in Spain is part of the Social Security system. There are two pension categories in Spain: contributory and non-contributory – beneficiaries of this latter kind must not have been contributory and members of the Social Security system during their working life, as this pension scheme targets low-income or disabled people, but not only -. The pension system is also financed by a payroll tax. The employee pays 4.7% of his salary, while employers must pay the equivalent of 23.6% of an employee's salary in the plan¹²⁴.

Spending on pensions is key from a financial point of view because, together with the payments for the unemployed, it accounts for most of the social spending in Spain, increasing even more in 2018 due to the increase of pensioners and the amount of their benefit. Last year, spending on social benefits reached 15.3% of GDP while unemployment fell due to the creation of new jobs, since many long-term unemployed stopped receiving their benefit to go to collect a lower subsidy. In 2018, the government has included in its 2018 budgets an increase between 1% and 3% in social spending, whose main part is pensions. In last year's budget, the increase in this item was 3.1% of GDP while unemployment fell by 6.6% due to the reduction in the unemployment rate¹²⁵.

First of all, let's start by analyzing the evolution of pension spending in recent years. Below is the expenditure on pensions in Spain and its comparison with other developed countries¹²⁶:

¹²² For a detailed explanation of the Spanish pension system, I refer the reader to the following article: Hernández de Cos, Jimeno and Ramos (2017).

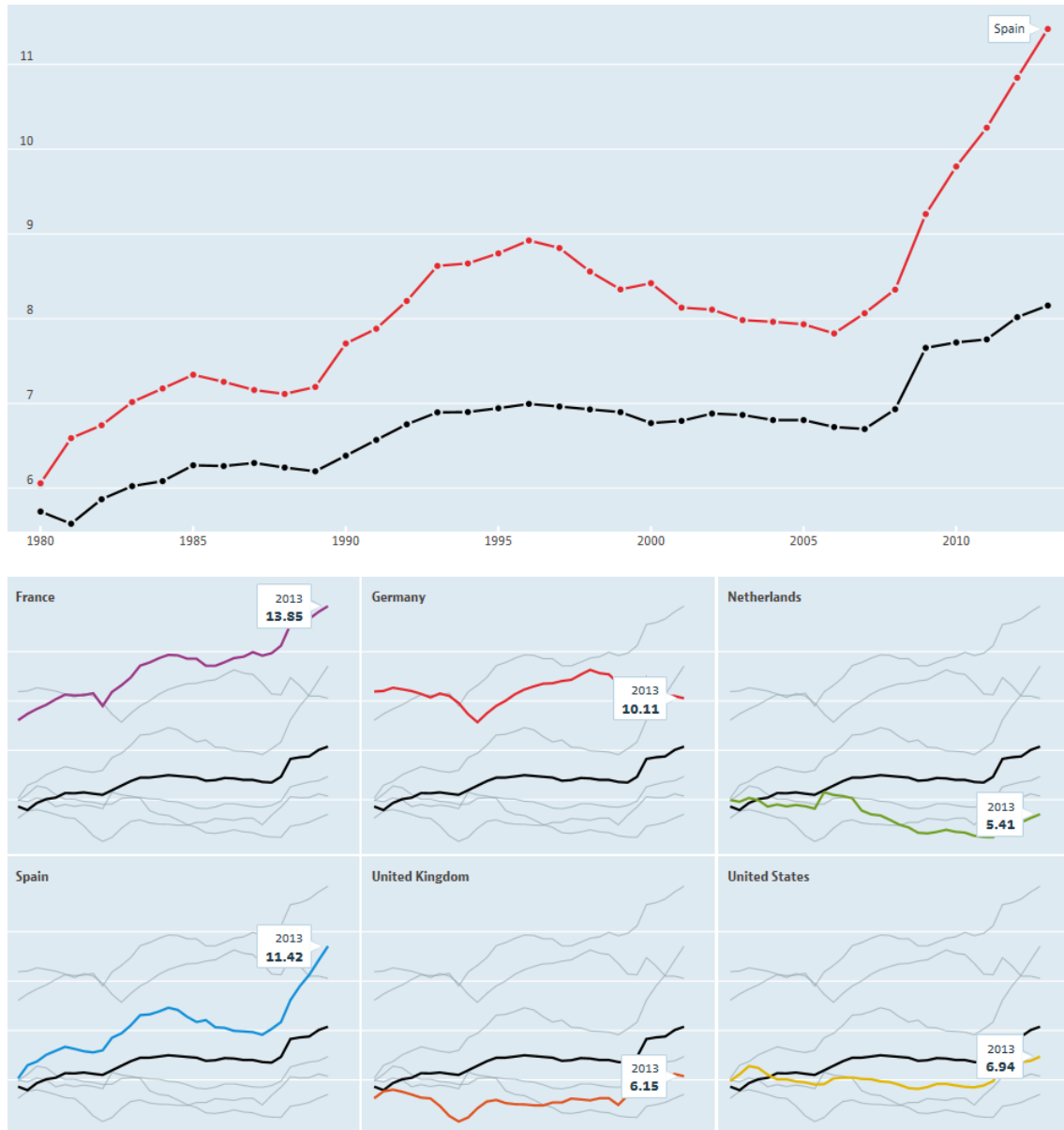
¹²³ Twenty years ago serious problems were already foreseen regarding the pension system: "[...] the future of the current pension systems in societies that are committed to persistent processes of aging of their populations and the very strong growth of public health expenditures raise both Spain as in many other European countries, the need to introduce reforms that, addressing these problems, prevent reaching unsustainable financial situations in temporary horizons not too distant": Rojo, Luis Ángel (2002)

¹²⁴ According to the brief description given by the OECD: "The Spanish public pension system consists of a single, earnings-related benefit in the contribution level, with a means-tested minimum pension. There is also a non-contribution means-tested level, which replaces the previous special social assistance scheme": OECD (2017)

¹²⁵ For these references check: Goicochea, Nieves. Pensiones y desempleo volverán a 'engullir' la mayor parte del gasto social de 2018. *Cadena Ser*. Madrid 03/04/2018 - 11:12 h. CEST http://cadenaser.com/ser/2018/04/02/economia/1522704032_589802.html (Accessed 2018-05-23); and bear in mind that "in the 2017 budget project, social spending accounted for 55.8% of the total, 2.7% more than in 2016".

¹²⁶ Data extracted from OECD: "Pension spending is defined as all cash expenditures (including lump-sum payments) on old-age and survivors' pensions. Old-age cash benefits provide an income for persons retired from the labour market or guarantee incomes when a person has reached a 'standard' pensionable age or fulfilled the necessary contributory requirements. This category also includes early retirement pensions: pensions paid before the beneficiary has reached the 'standard' pensionable age relevant to the programme. It excludes programmes concerning early retirement for labour market reasons. Old-age pensions includes supplements for dependents paid to old-age pensioners with dependents under old-age cash benefits. Old age also includes social expenditure on services for the elderly people, services such as day care and rehabilitation services, home-help services and other benefits in kind. It also includes expenditure on the provision of residential care in an institution. This indicator is measured in percentage of GDP broken down by public and private sector. Private pension spending includes payments made to private pension plan members, or dependents after retirement and covers persons working in both the public and private sectors". Pension Spending. *OECD Statistics* <https://data.oecd.org/socialexp/pension-spending.htm> (Accessed 2018-05-23)

Figure 68: Evolution of public sector employment in Spain (1987 – 2013, 2nd quarter of each year)

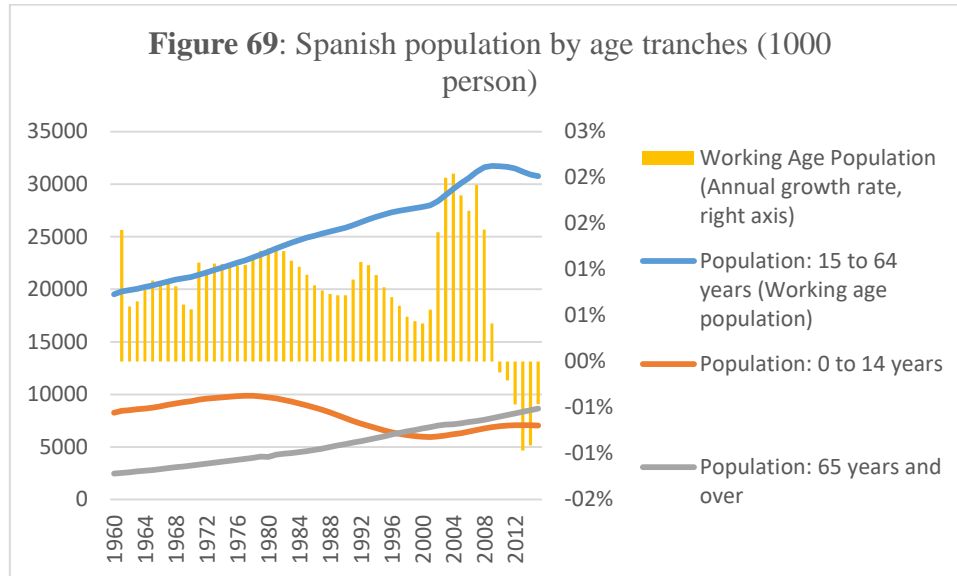


The above graphs show us two aspects mainly:

- Pension spending in Spain has followed a trend very similar to that followed by public spending - which makes sense, since pensions are its biggest expense along with unemployment benefits – and debt. Its trend is also related with the increase in GDP, employment and tax revenues during the Great Bubble period. From a very small spending level in pensions over GDP during the 60s and 70s, since 1980 there is an increase that, although with different pauses - such as in the late 1980s and early 2000s - , remains constant and continued over time, peaking after the Great Crisis of 2008 and still increasing.
- Although Spain still has a pension expenditure on GDP lower than France, its spending is already greater than that of the UK, the USA, Germany and the Netherlands; and, the fundamental thing is this: it has been the country that in less time has seen spending on pensions increase more strongly - perhaps in a similar way to France -, especially after the crisis of 2008, when it goes from being in a decade minimum at 8% of GDP, to be almost around 12% of GDP afterwards.

The increase in spending on pensions, which should not be dangerous in itself, puts Spain in a delicate situation - not only because of the importance and the political and social sensitivity of the issue - due to the particularities of employment and the Spanish population trend, especially in the long term, and the very structure of the pension system, generally quite generous¹²⁷, and especially generous with some, probably this being one of the big problems of the system: not generous with many, but too much with some¹²⁸.

If we look at the population data now we will see the black future that awaits Spain:



As we have already explained in the first section, there are several important points of the variation rates of the population in Spain as well as the Labor Force to be noted:

- Working Age Population, although it has been growing since the early 1960s, suffered a small fall in its growth rate during the 1990s, which was fixed with the massive influx of immigrants. However, after the outbreak of the Great Bubble, Spanish population, which suffers from low birth rates, and now without immigration, is falling, leading the similar trend that we can observe regarding Working Age Population: strong negative growth rates after the crisis.
- In the mid-1990s, for the first time, the number of people aged 65 or over surpassed people that had 0 to 14 years old; the trend is that this difference will further grow in the future. This issue is especially important since, based on how the pension system works in Spain, sufficient workers will be required in order to pay the pension expenses of current pensioners. The fall in the population from 0 to 14 began in the mid-70s, it grew somewhat at the end of the 2000s - possibly thanks to immigration - and stagnated afterwards, showing a strong decreasing trend in recent years.

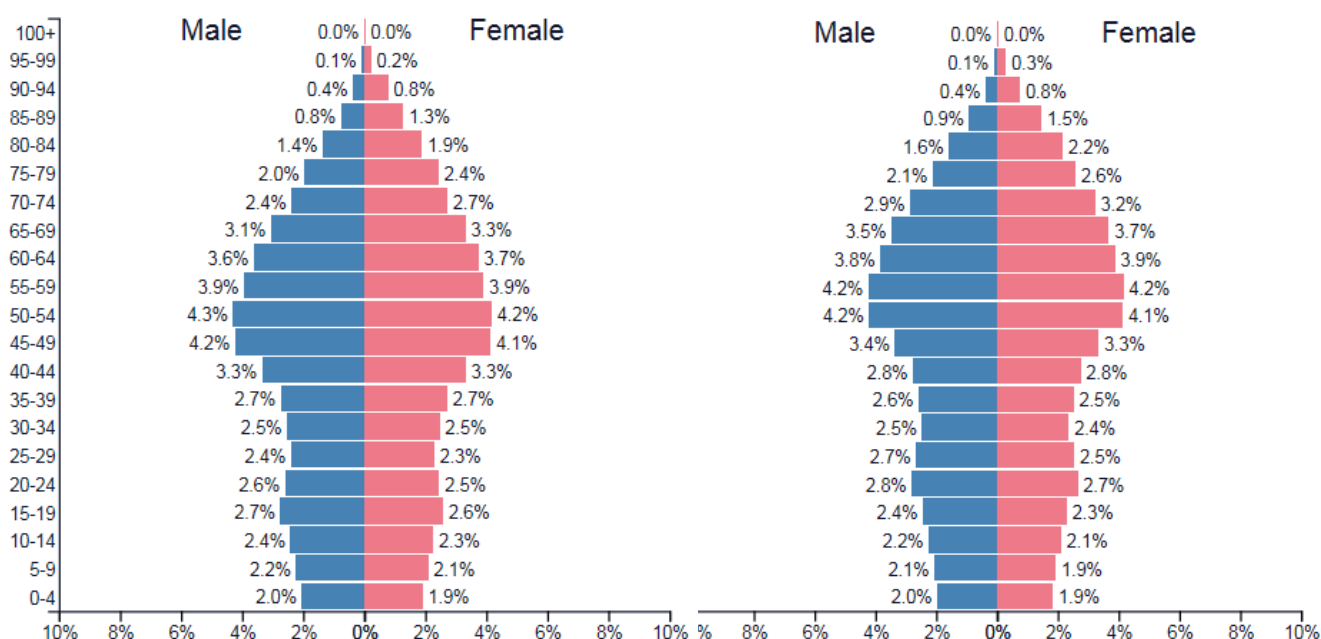
¹²⁷ "The income of retired Spaniards who are between 66 and 75 is six percent higher than the national average, according to the Organization for Economic Cooperation and Development (OECD). Among the OECD's 35 member states, this age group earns seven percent less after retirement. But in Spain the opposite happens. It is an atypical case surpassed only by France, where pensioners ages 66 through 75 make 10 percent more than the national average. Yet in 2006, this age group's income was 19% below average. In this time, their relative income has advanced 25 points, reflecting a combination of wage devaluation, high jobless rates, guaranteed pensions and better lifetime contributions to Social Security": Maqueda, Antonio. Retired Spaniards earn more than the national average. *El País*. 29 ENE 2018 - 12:56 CET https://elpais.com/elpais/2018/01/29/inenglish/1517221833_150575.html (Accessed 2018-05-23).

¹²⁸ "Only Luxembourg has a higher (public) pension than the Spanish in Europe": Bajo Benayas, José Luis. Solo Luxemburgo tiene una pensión máxima más elevada que la española en Europa. *El Economista*. 5/03/2018 - 7:22 <http://www.eleconomista.es/economia/noticias/8981242/03/18/Solo-Luxemburgo-tiene-una-pension-maxima-mas-elevada-que-la-espanola-en-Europa.html> (Accessed 2018-05-23).

- The other key point has to do with employment. It rose spectacularly during the Great Bubble, but has sunk after the Great Crisis. As we were saying, today's pensions are paid by the employees (and companies) of today, and today there are more than four million people in Spain who cannot find a job. It is the inability to create employment that is behind the Social Security deficit (it is estimated that the effects of the crisis on jobs and wages explain 70% of the current deficit) and the same inability to create jobs as well as the creation of precarious jobs is what lead some women to delay the arrival of children and, finally in some case, to the abandonment of motherhood, leading to low fertility rates at the same time that there exists an increase in the growth of the aging index¹²⁹.

As we were saying, the population pyramid is another very important indicator to look at in order to analyze the sustainability of the pension system in the long term. Population aging will accelerate at a very fast pace in Spain, which will have the second highest age-dependency ratio in the OECD in 2050, only after Japan. According to UN projections, there will be 76 people above age 65 per 100 people aged 20-64 in 2050, against 30 currently, with only Japan having a (slightly) higher ratio. Projections from Eurostat are something lower with a future ratio of 69 instead of 76, but disturbing anyways. Ongoing aging puts pressure on both the financial sustainability and the income adequacy of the pension system¹³⁰.

Figure 70: Evolution Forecast of the Spanish population “pyramid” (2025 and 2030)



As we see in the population pyramid, the forecast in Spain is to births to be further reduced¹³¹ and population to be aging consistently, *ceteris paribus*. The changing demographic trends of Spain are, therefore, one of the growing concerns regarding the sustainability of the system, which

¹²⁹ Leguina, Joaquín. Pensiones: Las verdades del barquero. ABC. 22/03/2018 13:36h http://www.abc.es/opinion/abci-pensiones-verdades-barquero-201803220307_noticia.html (Accessed 2018-05-23).

¹³⁰ See the entire article OECD (2017)

¹³¹ Undoubtedly, births are the other key factor: "According to the projection of INE (2016), at the beginning of the fifties of this 21st century there will be 15.6 million people aged 65 and over (today there are 8.7 million), but the number of children (under 15 years old) will have fallen from the current 7 million to 5.2. Thus seen the things, in this scenario of the INE, the number of dependents (children + old) on the potentially active would be 1.47, which is somewhat less than what exists today": Leguina, Joaquín. Pensiones: Las verdades del barquero. ABC. 22/03/2018 13:36h http://www.abc.es/opinion/abci-pensiones-verdades-barquero-201803220307_noticia.html (Accessed 2018-05-23).

already represents a large part of public spending. A growing and aging population and a declining fertility rate are two sources of significant tension over Spain's public budgets and finances, since the public pension system has to rely on a smaller productive population to contribute enough taxes to compensate low population growth and higher retirement rates in the future. At the same time, it is also forecasted how people will live increasingly longer periods of times, which will probably will be associated to a higher need for expensive health services¹³².

3.1.2.3 *The black hole of the autonomic system¹³³: the great obstacle to the true economic development of the country*

Undoubtedly, the greatest obstacle to a sustainable development of public finances in Spain are the autonomies, and with them all the organisms, associations and other entities that are constantly and continuously financing unclear activities with regards to their usefulness or efficiency. If this was not enough, the regional administration, which duplicates, when it does not undo¹³⁴, many of the functions that by law must be carried out by the Central State¹³⁵, stayed in the synthesis of the corruption that has plagued Spain in the last years of maximum euphoria of the Great Bubble; and not only that, but it is at the same synthesis and development of the Great Real Estate and Housing Bubble thanks to the direct or indirect financing that it gave to many of the construction, real estate and housing projects that took place during that time¹³⁶. Although this section is not intended to be extensive or exhaustive in terms of the criticism of the autonomic model - although it could be -, it is a question of briefly sketching the following thesis, through the analysis of some summary data, namely: that the autonomic model is one of the main sources of increased public and administrative expenditure in Spain, both in its origin and in its development, and that this increase, continued over time, is called to continue until the Spanish State - last guarantor of regional financing - reaches a level of total unsustainability or bankruptcy, heavily damaging the Spanish Nation meanwhile.

The creation of the Autonomic regional system and the subsequent development of this system over time led to an extraordinary transformation of the territorial structure of the State over a period of more than twenty-five years. Although during this period - similarly brief, if we

¹³² The Spanish statistician and politician, Leguina, is more optimistic about the future: "[...] can a population of working age be smaller than the current one produce equal or more than now? The answer is yes, because in the first place, the employment rate (percentage of employed people over the working-age population) is currently 61% in Spain and could easily reach 73 or 75%. In addition, everything leads us to think that productivity per person employed under normal conditions will grow significantly": Leguina, Joaquín. Pensiones: Las verdades del barquero. *ABC*. 22/03/2018 13:36h http://www.abc.es/opinion/abci-pensiones-verdades-barquero-201803220307_noticia.html (Accessed 2018-05-23).

¹³³ The best summary on the subject can be found directly in: El problema son las autonomías. El recorte más necesario: sobran las Autonomías. *Blog*. <https://elproblemasonlasautonomias.wordpress.com/> (Accessed 2018-05-23).

¹³⁴ "For the signatories of the declaration [declaration against the current performance of the Spanish Public Treasury], the separation of the liquidation and sanctioning procedures is more formal than real, while a disturbing deterioration of the principle of legal certainty is taking place. Especially when the territorial structure of the State favors, according to the authors of the manifesto, the existence of a fiscal cantonalism. This is more worrying, they maintain, taking into account that the autonomous communities have ample capacity to spend, but their powers to collect are very limited, which has generated enormous deficiencies from the point of view of the management of public resources. To the point that public debt is already close to 100% of GDP": Sánchez, Carlos. 35 catedráticos lanzan un ataque sin precedentes contra Hacienda. *El Confidencial*. 18.05.2018 – 05:00 H https://www.elconfidencial.com/economia/2018-05-18/hacienda-declaracion-granada-fraude-multinacionales-desigualdad-impuestos-subditos-ciudadanos-equidad-nacionalismos-cantonalismo-fiscal-culpabilidad-inocencia-seguridad-juridica_1565286/ (Accessed 2018-05-23).

¹³⁵ Known and contrasted fact, although tolerated when not driven, for reasons that are not always clear, although normally of an electoralist and short-term nature.

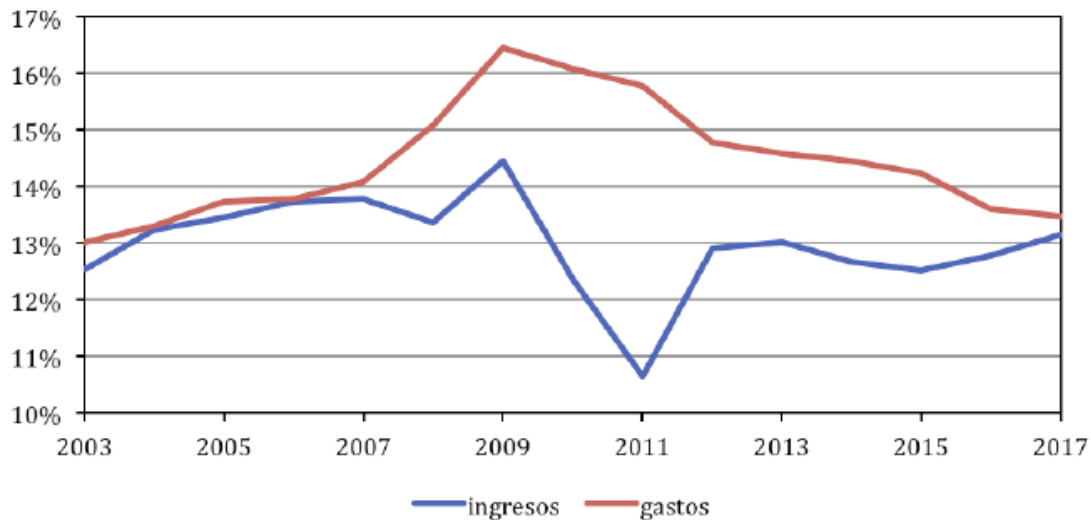
¹³⁶ The case of the Valencian Community is paradigmatic: with more than fifty cases of corruption of local or regional character. Exemplifying in its corruption was the case related to Formula 1 in the Valencian Community. However, perhaps the community most flogged - while its corruption has been silenced - has been Catalonia.

situate ourselves in a historical perspective - the process has been marked by difficulties and controversies, the facts, in a convincing way, highlight an incontestable reality: Spain has gone from being a very centralized country in the late 60's, to be one of the most decentralized – in practice – among western European countries, a development that prevails even when the comparison is made with countries endowed with a federal structure.

To understand the importance that regional spending has on total spending, we must refer to some available data. In 2003, the Autonomous Communities– this is pretty old data, but very complete and when it has changed, has been for the worse -, already managed more than one third (34.8%) of the total expenditure of Public Administrations (49% if Social Security is excluded), which makes them the most important level within the set of Public Administrations. The predominance of the Autonomous Communities is even more evident when attending to the figures of public employment: they concentrate almost half (47%) of the total employment (68% if Social Security is excluded), far above the other levels within the set of Public Administrations. The participation of the Autonomous Communities in total public expenditure has evolved as follows: 0.2% in 1980, 10.5% in 1985, 14.6% in 1990, and 26.9% in 2000; in 2002, the level was already 30%. With regard to the magnitude of budgetary resources managed by the regional level, these have gone from 8,439.3 million euros in 1984 to 132,424.2 million in 2005. In terms of GDP, the previous figures imply a jump from 5.0% to 17.7%¹³⁷.

Before the crisis, we see an increase in public spending in the Autonomous Communities¹³⁸, that although it moderates and falls after the crisis, it still remains far from the income, putting pressure on the extra financing to obtain from the Central State, since the expenses are around 10% of GDP, considerable value.

Figure 71: Adjusted non-financial expenses and revenues as % of GDP (2003 = 100, for all the Spanish autonomic communities)

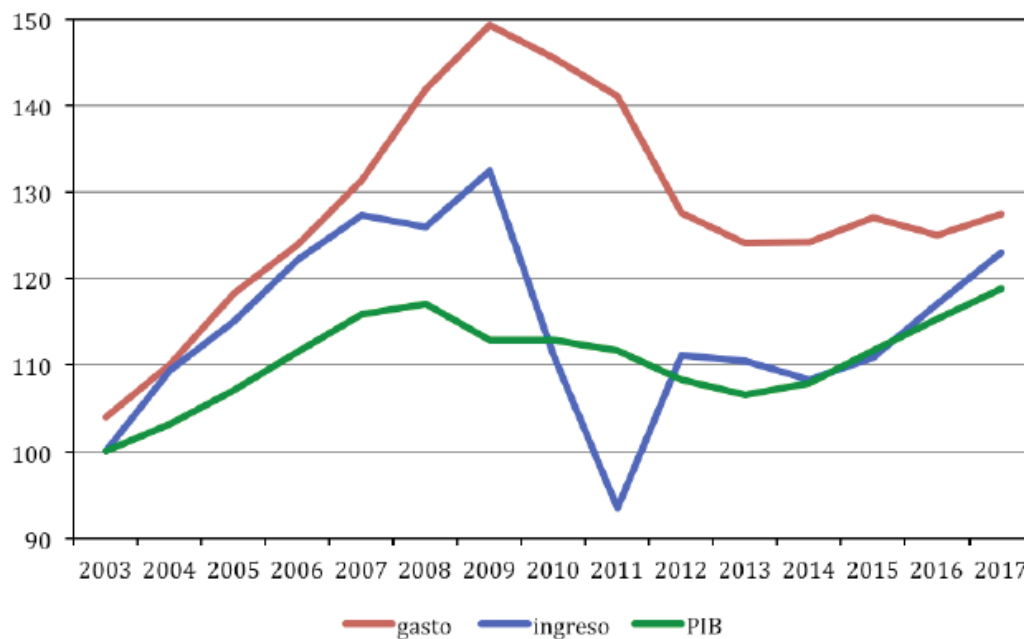


The following graph is also interesting to see how the autonomous communities tend, or have tended in recent years, to spend more than the GDP itself, making the system difficult to sustain in the long term, especially after the economic crisis.

¹³⁷ Data and references taken from the interesting and useful article on the topic: Domínguez Martínez, López del Paso and López (2006). Somewhat old, but one of the best studies on the topic.

¹³⁸ The data are extracted directly from the study carried out by the BBVA on Public Spending of Autonomies. See: De la Fuente (2006)

Figure 72: Autonomic communities' GDP evolution, as well as expenses and revenues (2003 = 100, adjusted all variables to constant prices)



As we already mentioned previously, there has been an important and constant increase in autonomic public employment, demonstrated by recent studies¹³⁹. There are "over 920,000 employees in the autonomies, of which 520,000 are plugged in and the rest, about 400,000, are the product of multiplying by 17 the management structure"¹⁴⁰. In fact, Spain is, with overwhelming difference, the European country with the most politicians per capita. A recent study number in 445,568 the politicians that Spain has (including the liberated trade unions), twice as much as other surrounding European countries, which with twice the number of inhabitants have three times less political positions¹⁴¹.

In relation to the autonomous development and the territorial structure in Spain, there are several points to take into account as a final conclusion based on the analysis carried out (data previous to the crisis)¹⁴²:

- Spain has become one of the western countries with a greater degree of decentralization in the public sector, within which the Autonomous Communities have become the most important sub-sector quantitatively, managing around 35% of total public expenditure – sometimes this figure varies depending the items taken into account –. Almost 60% of the salaries of the Public Administrations are concentrated at the regional level, which, on the other hand, channels practically 90% of functions as important as public health and education.

¹³⁹ The best analysis on the cost of the disaster of the autonomies are two books: 'El despilfarro: la sangría de la España autonómica,' from journalist Federico Castaño y 'El ocaso de las autonomías' from economist Joaquín Javaloy

¹⁴⁰ The Spanish finance minister said not long ago: "of the 3 million public employees, only 700,000 have entered with clean and transparent evidence" Centeno, Roberto. El Estado autonómico: un despilfarro del 10% del PIB. *El Confidencial*. 20.03.2017 – 05:00 H https://blogs.elconfidencial.com/economia/el-disparate-economico/2017-03-20/el-estado-autonomico-un-despilfarro-del-10-del-pib_1351235/ (Accessed 2018-05-23).

¹⁴¹ According to the economist Roberto Centeno: Centeno, Roberto. El Estado autonómico: un despilfarro del 10% del PIB. *El Confidencial*. 20.03.2017 – 05:00 H https://blogs.elconfidencial.com/economia/el-disparate-economico/2017-03-20/el-estado-autonomico-un-despilfarro-del-10-del-pib_1351235/ (Accessed 2018-05-23): "If we put in line all the Spanish political and union positions, giving 50 centimeters each, they would total no less than 223 kilometers".

¹⁴² They are somewhat old data, although valid to demonstrate the magnitude of the Autonomies, and their influence on the public expenditure of the Central State. Data and conclusions drawn from the study: Domínguez Martínez, López del Paso and López (2006). I take part of its conclusions - the most clarifying ones - because they seem to me an incredibly clarifying image of the seriousness of the situation

- For the Autonomic communities as a whole, the non-financial public expenditure ratio with respect to GDP represents around 15% (data previous to the crisis), although there are notable contrasts in the relative weight within the economy of the different regions, whose extremes correspond to Extremadura (27%) and Madrid (9%), confirming a negative statistical relationship between this ratio and GDP per capita. On the other hand, the distribution of per capita expenditure shows considerable dispersion.
- From a functional perspective, two functions, health and education, absorb more than half of the total expenditure.
- The total population and the population over 65 are the two variables with the greatest explanatory capacity of the levels of total public expenditure per inhabitant reached by the Autonomic Communities.
- Although the deficit of the Autonomic Communities has certainly declined significantly in recent years, especially since the Great Crisis of 2008, it is no less true that the current budgetary situation of the Autonomic Communities is less comfortable than it might seem at first sight because the fall in the deficit observed in recent years reflects in part a sharp reduction in interests from the debt discharged from them due to discretionary actions of the central government that may not be maintained in the future, as well as very favorable settlements of the financing system at a time of change in the cycle – very clearly exemplified by Catalonia, a broken community, rescued by the central state –. If the impact of these factors is eliminated, the Autonomic Communities' deficit would have been 0.85 points of GDP in 2017, a quarter of a point above the target set for that year¹⁴³.

3.2 The scourge of corruption and the role of institutions: the explosive cocktail of huge capital inflows¹⁴⁴, weak (and increasingly corrupted) institutions¹⁴⁵ and a housing and real state bubble¹⁴⁶

Corruption is one of the greatest scourges coming as a direct consequence of the Great Real Estate and Housing Bubble in Spain. Although it is not a matter of making a thorough study of corruption in Spain, I would like to outline some important ideas on the subject. Corruption in Spain has certainly been intimately related both to the Great Real Estate and Housing Bubble - due to the very essence of the political-financial organization of the bubble, as explained above - and at present it is still a scourge that explains the gradual degradation of Spanish institutions and their weakness, which affects the tax system, the Public Treasury and the own control of public spending, especially in autonomies, among other things¹⁴⁷.

¹⁴³ See the thorough study De la Fuente (2006)

¹⁴⁴ Very recently, in a commission of investigation, Pedro Solbes, finance of minister, admitted clearly that the bubble was maintained for too long due to the availability of cheap funding: Pedro Solbes (ex-Spanish Minister of Finance) in the Commission to Investigate the Housing Bubble and the Crisis. Youtube. <https://www.youtube.com/watch?v=mQoU8groq40&list=PLF8MTGag-K7PfUtlS2cqEae76CYH3OFQD&index=0> (Accessed 2018-05-23)

¹⁴⁵ Villaverde et al. (2013) draw similar conclusions: "This paper argues that, as the euro facilitated large flows of capital and a financial bubble in peripheral countries, economic reforms were abandoned, institutions deteriorated, the response to the credit bubble was delayed, and the growth prospects of these countries declined".

¹⁴⁶ This section follows and deepens on the analyses and conclusions exposed in Challe, López and Mengus (2018)

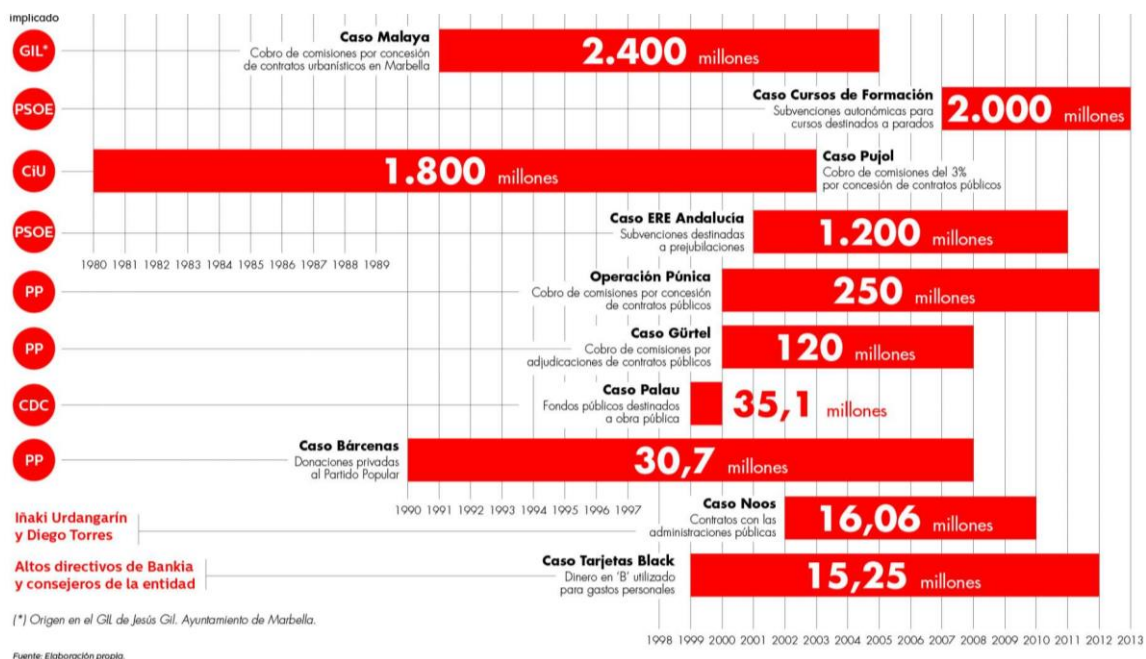
¹⁴⁷ It has certainly been demonstrated the perverse influence of the public sector in the economy during the boom years "In order to shed some light on the potential sources of this phenomenon [misallocation of resources, the main cause for these authors of very weak TFP growth in the period 1995 – 2007] in Spain, we find that industries in which the influence of the public sector is larger (e.g. through licensing or regulations) experienced significantly larger increases in misallocation. In contrast, other characteristics such as skill intensity, innovative content, and financial dependence are unrelated to changes in allocative efficiency. The specific channels through which a higher influence of the public sector might deteriorate the allocation of resources across firms remain to be explored": García-Santana et al (2016)

As an overview, the general graphic that appears below¹⁴⁸ shows very clearly according to the most recent estimates - which could certainly increase in the future as the data ends in 2013 - the cost that corruption has had in terms of money defrauded, that is money that has been lost. In the end, even if total magnitudes are important, the key aspect is much more the qualitative magnitude and the higher number of cases of corruption than how much has been lost, precisely because a high number points out to a systemic problem of institutions, even if the amounts are not extremely high.

Another very interesting point about corruption cases in Spain has to do with the fact that almost all of them are, either directly or indirectly, related with the speculative euphoria of the Great Bubble (see the cases below); and many, moreover, occurred in the last years of the Great Bubble, the most intense ones (2000 - 2007).

Figure 73: How much corruption cases are costing in Spain (money defrauded known so far, until 2013, the four biggest cases below)

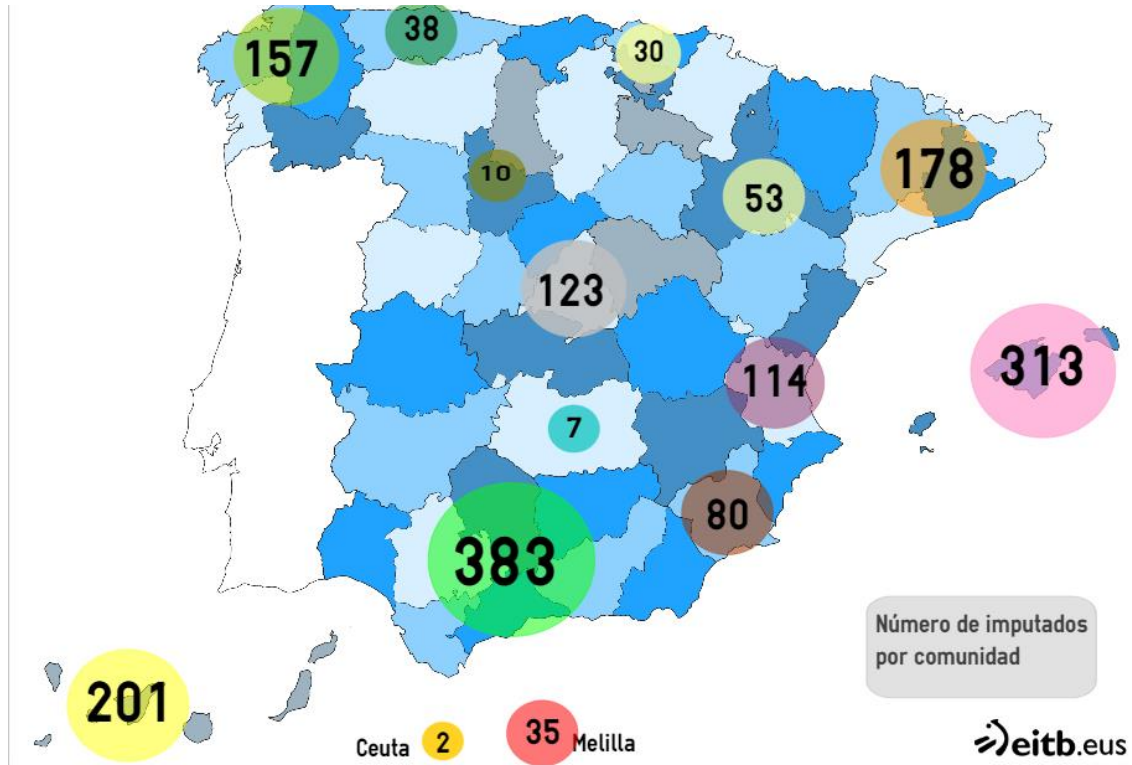
1. Caso Malaya (2400 m€): cobro de comisiones por concesión de contratos urbanísticos en Marbella.
2. Caso Cursos de Formación (2000 m€): subvenciones autonómicas para cursos destinados a parados.
3. Caso Pujol: Cobro de comisiones del 3% por concesión de contratos públicos.
4. Caso ERE Andalucía (1200 m€): Subvenciones destinadas a prejubilaciones.



We can also see that corruption has been widely distributed among the different autonomic communities. The biggest and more damaging ones took place precisely in those places where the Great Bubble has a higher impact, especially regions with sea side where tourism was important (Andalucía, Valencia, Mallorca) or big cities, where prices skyrocketed (notably Madrid and Barcelona).

¹⁴⁸ Extracted from: Balaguer, Esperanza. La factura de la corrupción se eleva a casi 10.000 millones y sigue sumando. Bez. 20 de enero de 2016 <https://www.bez.es/808660786/coste-de-la-corrupcion.html> (Accessed 2018-05-23).

Figure 74: Corruption Map: number of persons charged for corruption per community



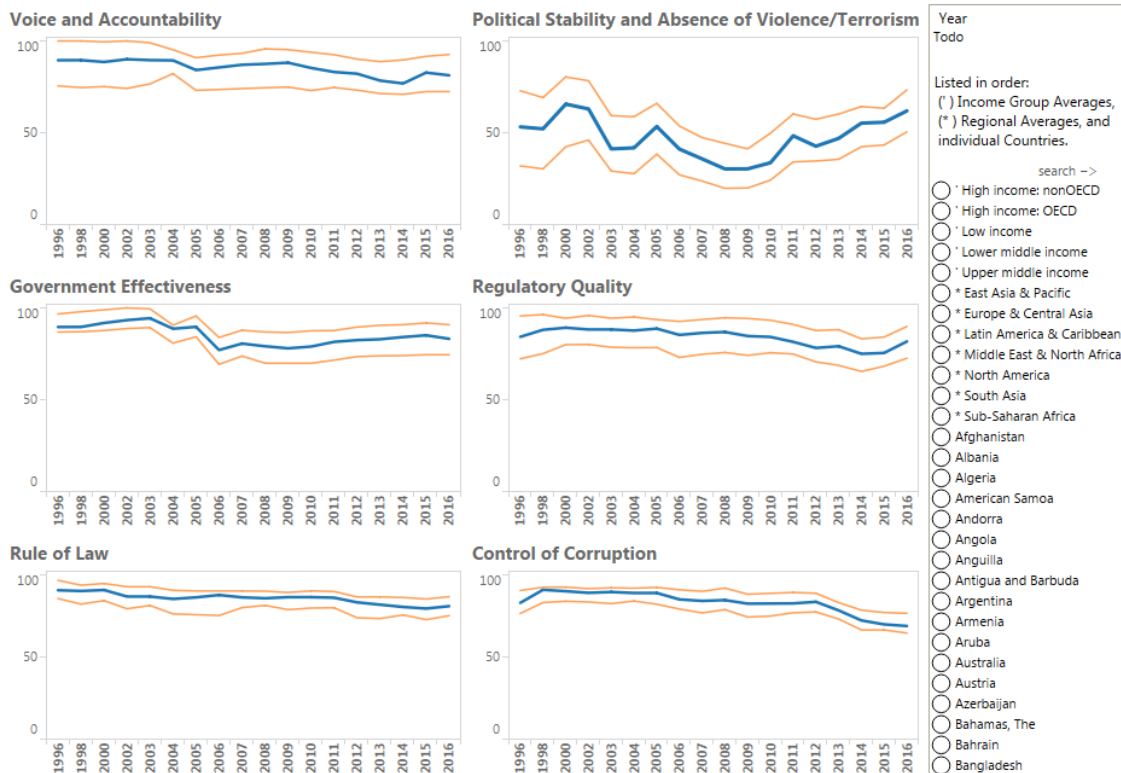
More generally, the data shown below, taken from the World Bank's Worldwide Governance Indicator¹⁴⁹ – indicators on the improvement or not of the institutions in the different countries - show a deterioration trend of almost all indicators on institution quality and it is interesting to see how the period from 2000 to 2007, despite economic boost, was a period of important decline. Although the downward trend is not incredibly important, it does show a slight drop, that is followed by a stagnation from which not further improvement is forecasted based on the trend. The fall is especially clear in the "Control of Corruption" and "Rule of Law", very possibly having influenced these two factors the intense variations that have occurred in "Political Stability and Absence of Violence/Terrorism" in the last years due to the mixture of economic crisis, social unrest and political instability¹⁵⁰.

¹⁴⁹ Diagrams extracted from the World Bank Database on "Worldwide Governance Indicators". See: Worldwide Governance Indicators. *World Bank*. <http://info.worldbank.org/governance/wgi/#home> (Accessed 2018-05-23)

¹⁵⁰ And this is a singular trend of Spain and other countries of Southern Europe, which finds no parallel in other nations: "Southern European countries stand out among European countries, and more generally among OECD countries, in that they were the only countries that experienced a significant decline in the quality of their institutions": Challe, López and Mengus (2018)

Figure 75: World Bank's Worldwide Governance Indicators (Spain)

Income Group, Region, or Country: **Spain**



The inner, thicker blue line shows the selected country's percentile rank on each of the six aggregate governance indicators.
The outer, thinner red lines show the indicate margins of error.

Source: Kaufmann D., A. Kraay, and M. Mastruzzi (2010), *The Worldwide Governance Indicators: Methodology and Analytical Issues*

The Worldwide Governance Indicators are available at: www.govindicators.org

Note: The Worldwide Governance Indicators (WGI) are a research dataset summarizing the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms. The WGI do not reflect the official views of the World Bank, its Executive Directors, or the countries they represent. The WGI are not used by the World Bank Group to allocate resources.

The increase in corruption, which is linked to the fall in the quality of Spanish institutions and the increase in their weakness, is closely related not only to the speculative euphoria of the Great Bubble - due to its intrinsic relationship with the political-institutional power, as has already been explained before¹⁵¹ - but also to the entry of Spain into the euro and the massive inflow of cheap and easily accessible capital, mainly used to invest in real estate, construction and housing sectors. This fact, which helped in large part to the inflation of the Big Bubble as we explained in the section in which we talked about the bubble, also helped to relax the controls over Spanish institutional quality, increased unrestrained spending and boosted a false wealth effect awareness which turned out to be extremely harmful for Spain.

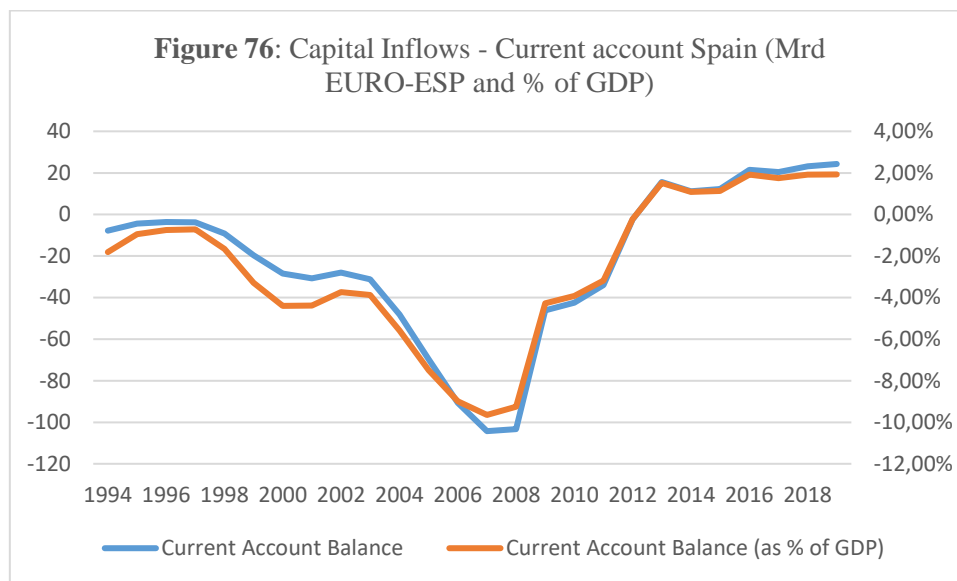
Recently, a more in-depth study has been published showing how "Southern European countries (Spain, Portugal, Italy and Greece) [...] experienced a significant decline in the quality of their institutions in the run-up to the euro currency, a period of cheap external funding and large capital inflows. We confirm this joint pattern of capital flows and institutional decline in a large panel of countries since the mid-1990s"¹⁵², and it is precisely this article that serves as a reference and basis for the brief analysis regarding the increase in corruption, the fall in

¹⁵¹ Institutions are a fundamental element for the long-term economic development of a Nation and, therefore, these aspects have to be taken into account when analyzing the development of Spain and to draw up the action plans necessary for its future improvement.

¹⁵² See: Challe, López and Mengus (2018). The article also shows that: "[...] persistent capital inflows are systematically followed by a decline in the quality of domestic institutions. We show that this pattern is unlikely to be driven by reverse causality (from worse institutions to larger capital inflows) or by the endogeneity of capital inflows".

institutional quality and its relationship with the inflow of capital and above all the euphoria derived from the Great Real Estate and Housing Bubble. Starting from this analysis, a new plan for the future can be drawn, in order to avoid the mistakes from the past and improve the problems from the present.

As has already been showed above, the entry of Spain into the euro had as a first and direct consequence that the interests of the different European nations fell and aligned themselves together with the interests of the German bond. This fact ended up reducing the borrowing costs for the majority of southern European States and individuals, finally leading to an increase in debt due to lack of institutional control and, in the case of Spain, to – even if there are other reasons – the creation of a Great Bubble. Below the current account deficit can be observed, as well as the great need of external financing that Spain had between 2000 and 2007, that is, until the Great Crisis. This deficit could only be compensated by external financing that Spain could obtain cheaply and without much difficulties from abroad thanks, first, to the lax monetary situation imposed by the European Central Bank and, second, to the arrival of foreign capital to invest¹⁵³.



The direct relationship between low interest rates and declining quality of public institutions, which is also shown in the aforementioned article, remains in the logical fact by which refinancing extractive projects becomes cheaper for the government; if this is not enough, compensating the losers for their losses in projects that didn't turn out well is also cheaper and more easily manageable, making extractive projects prevalent ex ante while government support becomes easier ex post influencing the way business and government decision are taken¹⁵⁴.

This is precisely what happened during the housing bubble. The government financed and helped finance many speculative projects thanks to the prosperity of the situation and the cheap capital it was receiving. In addition to this, the government became more benevolent when analyzing the projects and financials - which were almost always inflated - that were being proposed and that the same government for the most part had to finance itself, especially in

¹⁵³ There are many other papers that have dealt extensively on this subject. For example, see the paper by Fernández-Villaverde et al. (2013) on the role of capital inflows in Southern European countries since the mid-1990s as a key determinant of the abandonment of structural reforms, ultimately leading to a worsening of institutions and low growth.

¹⁵⁴ "We then develop an open-economy model of the "soft budget constraint" syndrome wherein persistently cheap funding from abroad (i) raises the prevalence of extractive projects and (ii) expands their support by the (benevolent) government ex post. While the government may in principle limit the prevalence of extractive projects by limiting the prevalence of extractive projects ex ante, we show that the incentives to do so is limited when foreign borrowing is cheap": Challe, López and Mengus (2018)

relation with big infrastructure projects¹⁵⁵. In addition, the incentives to stop this process are also lower when financing opportunities are easy to find and cheap. Therefore, after the Great Crisis of 2008, when the risk premium increased to levels of systemic risk, external capital and financing stopped at the same time that the world situation worsened considerably, causing the government to reverse or trying to reduce spending or, at least, stopping spending as it had done before. This is precisely the trend shown in the public expenditure graphs that were previously shown, where spending decreases or stagnates after the Great Crisis, as well as the institutional indicators of the World Bank, where deterioration either stops or decreases, but only after the Great Crisis.

Finally, we can draw some conclusions after what has been said previously:

- Spain has experienced an increase in corruption in recent decades but the climax of recent cases of corruption occurred between 2000 and 2007, just at the moment of greatest speculative euphoria during the Great Bubble.
- Due to the internal logic in the process of creation and encouragement of the Great Bubble, as well as the internal structure of the Spanish political system¹⁵⁶, Corruption has been the cause, as well as the consequence, of the Great Real Estate and Housing Bubble.
- Both the stimulus, although not so much the creation - which has other causes of a more internal Spanish character -, of the Great Bubble as the process of institutional degradation and weakness – causes and consequence of institutional deterioration - has at least something to do with the entry of Spain into the euro and what this entailed: the entry of cheap external capital¹⁵⁷ and falling interest rates and therefore cheap debt, which was not used in efficient projects most of the time, but rather in the artificial inflation of the Great Bubble and in the financing of ruinous projects¹⁵⁸.
- The drop in the quality of institutions and the increase in corruption is also closely related to negative productivity levels - an issue that will be more thoroughly addressed below - and current account deficits¹⁵⁹.

3.3 The Spanish “(labour) productivity puzzle”: The housing bubble, a low-skilled immigration boom and a dual (and deficient) labour market¹⁶⁰

As we saw in the first part of this work, Spain has had an anomalous behavior in relation to the growth and development of productivity - especially labor¹⁶¹, of which we will speak here, but also with regards to Total Factor Productivity, which will be further discussed in the next section -. Spain has traditionally been below other neighboring European nations in terms of the growth of labor productivity, especially since 1975, after the transformation of the political regime and the global oil crisis, followed by a decade of stagnation in the economy. However, after 2007

¹⁵⁵ Although in the Spanish case there are also important reasons for clientelism, nepotism, rapid enrichment, envy and selfishness that, from the purely social and even psychological point of view, played an important role.

¹⁵⁶ Oligarchic, not representative and without separation of powers; maintaining the worst of the old autocratic - bureaucratic regime, iron and hierarchical administration, political control over everything public, etc. - but without considering how good it was - a high performance and capacity civil servant body, administrative centralization, etc. -

¹⁵⁷ Through the “soft-budget constraint syndrome”: “[...] lower interest rates increase the government’s ability to bail-out its residents, thus exacerbating the ‘soft-budget constraint syndrome’. Put differently, this syndrome, and the aggregate inefficiency that results, are socially less costly when external funding is cheap; hence, the incentive to alleviate the syndrome by raising the quality of institutions is diminished”: Challe, López and Mengus (2018)

¹⁵⁸ “There are thousands of unfinished or empty properties throughout the country”: Blanchar, Clara. Documenting Spain’s construction boom and bust. *El País*. Barcelona 25 NOV 2015 - 09:19 CET https://elpais.com/elpais/2015/11/17/inenglish/1447759904_488087.html (Accessed 2018-05-23).

¹⁵⁹ Challe, López and Mengus (2018)

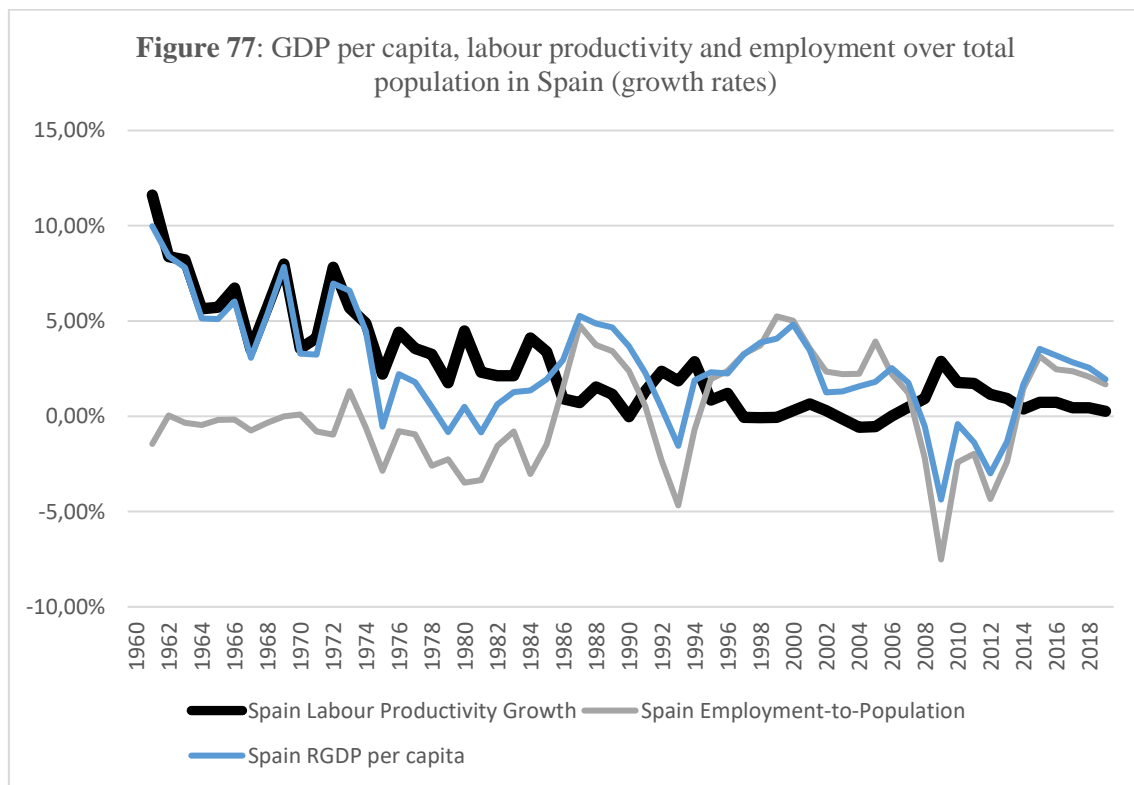
¹⁶⁰ This section follows and updates the conclusions in the Bank of Spain article: Hospido and Moreno-Galbis (2015). I have certainly used many of the insights from this incredibly interesting study.

¹⁶¹ The same trend can be observed in the annual growth of the Capital-to-Output just after the Great Crisis of 2008. To see the trend and the development of it, go to the first part.

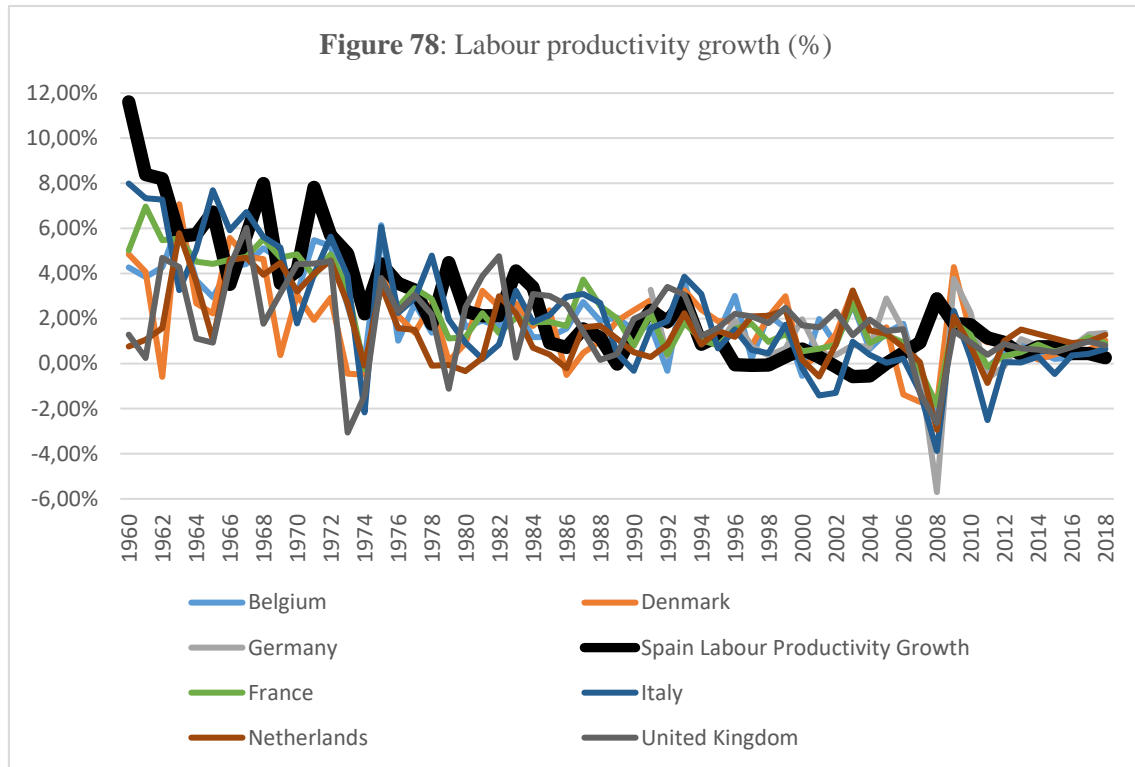
and the Great Crisis of 2008, this trend changes radically and Spain has higher labor productivity ratios than the surrounding countries, which had previously had higher ratios, and this despite the great stagnation of productivity during the years of great economic growth of employment and GDP during the euphoria of the Great Bubble.

In addition to what has already been seen and exposed in the first part of this work, the graphic shown below helps to see very clearly what we mean by the "productivity puzzle". In the following chart we can see the following trends:

- A downward trend in the growth of labor productivity since 1960 and throughout all the following decades, despite some very specific and exceptional increases.
- A particularly important stagnation of productivity between 1986 and 1990 and, especially, between 1994 and 2008, which in this case were the years of recovery of employment and real GDP.
- A considerable upturn in the growth in labor productivity after the Great Crisis of 2008, which was followed by a massive destruction of employment and a huge fall in Real GDP. This rebound in productivity ends up moderating until it stabilizes again at the previous and low pre-crisis levels insofar as both GDP and employment recover.



From a comparative perspective with other countries around Spain, this "anomalous" development of productivity in Spain can be seen in the following graph; development that, on the other hand, continues to be one of the factors behind the growth in wages, the development of a better industrial and technological network and, finally, the basis for a more sustainable and long-term economic growth.



We see that the trend in the growth of labor productivity in Spain, although it tends to fall since 1960 as in most developed nations, shows very clearly how its slope is more pronounced, since it was coming from pretty high levels in the 60s. From 1984 onwards, Spain really happens to be among the countries with the lowest growth in labor productivity, living only a small rebound from 1990 to 1994, followed by a stagnation of around 0% growth for almost a decade, the same one in which other nations were growing their labor productivity much more than Spain. Paradoxically, after the Great Crisis of 2008, when labor productivity in the vast majority of developed economies sank, the Spanish one grew enormously and, after that "mirage", it returned to the low levels from before the crisis, at the same that the Spanish GDP and national employment were little by little recovering.

Basing my conclusions essentially on the exhaustive studies carried out in Hospido and Galbis (2014)¹⁶² and in García Santana et al (2015)¹⁶³, but without going as deeply as they went in their studies of this topic and trying to maintain a more narrative and generalist perspective, the keys to this low growth of labor productivity from 1994 to 2007, the rebound of 2008-2010 and subsequent stabilization are going to be given here. We can mention three as the keys that explain the anomalous behavior of productivity in Spain in recent decades. Some of these keys either explain the short-term behavior of labor productivity, while other explain both or only the long-term one.

- The Spanish productive system and the Great bubble: This is the key factor to understand the following factors and why they occurred and how they influenced the Spanish economy and the recent "productivity puzzle" in recent decades. During the mid-80's the Spanish economic system swiftly changed to a model based on a low-productivity services sector, cheap tourism and the wealth effect brought by the ever-increasing prices in the construction sector. All of these factors suffered from very low productivity growth, at the same time that they were creating an artificial increase in GDP and employment.

¹⁶² From Hospido and Moreno Galbis (2015)

¹⁶³ From García-Santana et al (2016)

This issue will also be further discussed in the next section, where the development of the TFP will be analyzed, which also remains closely related to the labor structure of Spain, but not only to it.

- The Labor System factors: which help explain the "productivity puzzle" from 1990 to 2018, as well as the downward trend of labor productivity growth and its low rates since the mid-1970s.
 - Temporary Contracts: the massive destruction of jobs after 2008 especially affected employees with temporary contracts that are usually the youngest, the lowest qualified or, above all, those who worked in the construction sector during the years of speculative euphoria. These temporary jobs tend to always be associated with low productivity.
A dual, rigid and inefficient Labor system: following a rigid labor system that was inherited from the Regime prior to 1975, the Spanish system gradually moved towards a dual system, consisting of permanent contracts with very high salary and job security conditions, and permanent contracts, which entailed low security, low wages and little recognition. This trend, which began in 1984 when trying to modernize the old system - deeply unionized and fairly inefficient - is consolidated with the following reforms especially that of 1994, which ends up reaffirming this duality in the Spanish labor system. This rigidity of the system in terms of permanent contracts has made the Spanish labor system in the long term less flexible and difficult to adapt, while in the short term it has meant that after the Great Crisis the great adjustment of employment has been made on the temporary employees, less protected than the permanent ones, and who used to be young people, immigrants or people of low qualification, being in their majority in low productivity jobs, which explains in large part both the long-term and short-term trend of employment and labor productivity in Spain.
- Pre-crisis immigration influx: starting in the early 2000s and peaking around the mid-2000s, a massive influx of immigrants arrived to Spain, in their majority to work in the same low-productivity jobs that the Spanish economy had plenty of. As it has already been explained more in depth, this inflow of immigrants greatly increased the workforce and the labor force, until reaching levels never seen before in Spain, at least since the 60s. After the Great Crisis of 2008, this immigrant population will be one of the population sectors that will suffer the most unemployment.

Apart from these three causes, there are two others that also help explain the "productivity puzzle"¹⁶⁴:

- Mechanical effect of the fall in employment: a massive fall in employment such as that which occurred after the Great Crisis of 2008 can be directly associated with this enormous increase that has been perceived in productivity, and it makes sense to see how, after the recovery of GDP and employment, labor productivity returns to pre-crisis levels.
- TFP evolution: there are studies that show how wanting to establish a collective agreement at the level of the company and access to foreign markets are positively correlated with the performance of TFP during the period 1995-2015; In turn, before the Great Crisis the business TFP was negatively correlated with the size of temporary workers (1995 - 2007); However, the sign of this correlation changes completely during the Great Crisis (2008 - 2012), this change of trend being directly related in turn to the change in the composition of temporary workers in the Spanish economy since the Great

¹⁶⁴ “[...] the recent increase in Spanish aggregate productivity also responds to the evolution of the Total Factor Productivity (TFP) and to composition effects [...] the recent improvement in labour productivity could be related to a mechanical effect associated to the sharp drops in employment, but it could also be a simple composition effect due to the massive destruction of temporary, less productive positions”: Hospido and Moreno-Galbés (2016)

Crisis. This section will not be discussed in this section since it will be dedicated to the TFP and its development - due to its importance in the growth of productivity, and therefore of employment, economy and economic development - a specific section after this.

Next I will deal independently in different sections the points related to the labor system and the influx of immigrants and I will leave for the next section the points related to the growth of the TFP and its relationship with the development of the Spanish productive and economic system in the last decades.

3.3.1 A dual, inefficient and unfair labour¹⁶⁵ system¹⁶⁶

The flexibilization of the Spanish labor market has been one of the most debated issues throughout the period studied in this work, especially since 1975, when the structural problems of the archaic labor system build up during the previous decade were perceived much more clearly. Even if the labor system was not flexible during the 60's, the economic, social and political conditions in Spain and in the world were completely different; the problems came once the world economic conditions had changed after the oil crisis of 1973.

Internally for Spain, there were other factors of greater importance, apart from the change in the world economy. that affected the change in the labor market: the insufficiency of aggregate demand and the variations in its structure; diverse demographic factors such as the strong increase of young people in a large part of the period as a result of high birth rates in previous decades, or the rapid process of incorporation of women into the labor market and the change of direction in migratory flows; the modernization of agriculture, the industrial structure inherited from the past, which although fragile, began to be dismantled by forced marches thereafter, and the imbalances between the labor supply and demand for reasons of mobility or qualification. These factors, with a variable configuration over time, have contributed to the generation of high unemployment rates in the period; but to them we must add the institutional characteristics of the labor market, mainly expressed in a high degree of rigidity in the evolution of the level and structure of wages and labor costs, high dismissal costs and inflexible forms of contracting.

Efforts to make the system more flexible have focused mainly on reducing the rigidities of a scheme that seeks to defend stable employment by means of restrictions imposed on full-time and permanent employment contracts, as well as companies facing still a pretty unionized labor force and having to face high costs of dismissal. These issues, coming from the reforms that were being implemented, led, in fact, to opposite consequences to those desired: the measures discouraged the creation of jobs in the expansive stages, led to the closure of troubling companies and increased the cost of adjustments of staff in the phases of recession, reinforcing the ability of workers employed and protected to impose higher wages to the detriment of job applicants.

The Spanish dual system begins with the great reform of 1984 and consolidates especially with the reform of 1994, ten years later, creating, perhaps indirectly, this perverse and inefficient system where there is a population group with very good conditions in terms of their contracts, the permanent ones, while there's another population group with a precarious and insecure situation, through temporary contracts and similar.

¹⁶⁵ For all this historical description of the System of work in Spain I rely on the description made by Luis Ángel Rojo in Rojo, Luis Ángel (2002)

¹⁶⁶ Here the reader can check the main labour reforms in the last decades, its developments and main impacts: Documentación en El País. Cronología de las reformas laborales en España. *El País*. Madrid - 15 JUN 2010 - 17:44 CEST https://elpais.com/economia/2010/06/15/actualidad/1276587186_850215.html (Accessed 2018-05-23).

(1) The Labour Reform of 1984¹⁶⁷: the start of the dual hiring system

The 1984 reform¹⁶⁸ was proposed to address the problems that the Spanish economy was suffering from through the flexibilization of contractual forms of access to employment; and this is how the temporary employment promotion contracts - this is the beginning of the Spanish dual system – as well as internship and training contracts were born. Together with part-time contracts and “work and service” contracts, the reform considerably extended the range of contracts available. Nothing was advanced, however, in terms of simplifying and reducing the cost of redundancies in hiring permanently.¹⁶⁹ It is from this moment on that temporary contracts advanced very rapidly - until reaching a third of the total number of existing employment contracts in a short period of time - and contributed, undoubtedly, to the strong improvement in employment registered during the expansion from 1986 to 1991¹⁷⁰. However, the subsequent recession from 1992 to 1994 led to a very rapid rise in unemployment that showed the instability of the employment created, and the deficiencies in the system¹⁷¹.

(2) The Labour Reform of 1994¹⁷²: The consolidation of the dual labour system:

The second major employment reform was the 1994 reform that repealed a good part of the labor previous ordinances and tried to reduce the excess of temporality, reorienting the temporary hiring towards its justifying causes and marking a timid advance in the reduction of the difficulties and the costs of dismissal of workers with indefinite contracts. Subsequently, the government that emerged after the 1996 elections decided to leave in the hands of the representatives of employers and unions the continuity of those same line of reforms; reaching right afterwards the important Interconfederal Agreement for Stability in Employment, of 1997, which, while establishing limitations on temporary hiring, introduced the contract for the promotion of permanent hiring, a contract open to those who had a temporary contract and favouring groups of workers from eighteen to twenty-nine, over forty-five, long-term unemployed and disabled. This same agreement contemplated, for this type of contract, moderate costs in compensation for dismissal. In addition, the conditions required to qualify for a dismissal were relaxed¹⁷³. The agreements reached, initially conceived for a transitory period of four years,

¹⁶⁷ See the labour reform here: Ley 11/1994, de 19 de mayo, por la que se modifican determinados artículos del Estatuto de los Trabajadores, y del texto articulado de la Ley de Procedimiento Laboral y de la Ley sobre Infracciones y Sanciones en el Orden Social. BOE español. 23 de mayo de 1994, páginas 15805 a 15831 (27 págs.). Jefatura del Estado <https://www.boe.es/buscar/doc.php?id=BOE-A-1994-11610> (Accessed 2018-05-23).

¹⁶⁸ The reader can find a good summary of the law here: Cronología de las reformas laborales en España. *El País*. Madrid - 15 JUN 2010 - 17:44 CEST https://elpais.com/economia/2010/06/15/actualidad/1276587186_850215.html (Accessed 2018-05-23).

¹⁶⁹ "The reform was badly received in the trade union sphere and became one of the basic reasons for the growing confrontation of the unions with the socialist government in those years, expressed in an important strike activity that culminated in the general strike of December 1988. For employers, on the other hand, the new form of temporary contracting was very attractive, given the high costs of dismissing workers with contracts of indefinite duration": Rojo, Luis Ángel (2002)

¹⁷⁰ From Rojo, Luis Ángel (2002)

¹⁷¹ "The 1984 labour reform completely liberalized term contracts, which started to be used extensively after that date. This created, de facto, a dual labor market: jobs that existed before the reform remained 'protected', and jobs created after the reform could fall into either of the two separate worlds, permanent jobs and term jobs. As it should be expected, term contracts grew slowly at the beginning, and then they spread across the economy. By the early 1990s, one third of Spanish workers had a liberalized term contracts". See: Boldrin, Conde-Ruiz and Giménez (2010).

¹⁷² The reader can find a good summary of the law here: Cronología de las reformas laborales en España. *El País*. Madrid - 15 JUN 2010 - 17:44 CEST https://elpais.com/economia/2010/06/15/actualidad/1276587186_850215.html (Accessed 2018-05-23).

¹⁷³ "The 1994 reform was more far-reaching. It allowed private employment agencies to operate freely, and it substantially altered the Estatuto de los Trabajadores, weakening many of the previous employment protection rules. It also introduced additional flexibility in ring costs and in the collective bargaining process, allowing for a large variety of 'opt-out' clauses that could be used by companies subject to one form or another of 'economic distress'. Finally, the 1994 reform also reduced the generosity of the unemployment insurance program. It was completed in 1997 with the introduction of a new contract called the Contrato de Fomento a la Contratación Indefinida, which lowered severance pay albeit in a controversial way: the new contract did not apply to workers in the 30-44 age group who had been

reached a definitive character in the year 2001, at the same time that part-time contracts became more flexible.

(3) Collective agreements: difficult agreements and little flexibility:

The study quoted before¹⁷⁴, also made clear a non-negligible correlation - after the analysis that is done combining information at the firm level on balance sheet items, collective agreements and import-exports - between the performance of TFP during the period before and after the Great Crisis and the commitment in collective agreements. Thus we will make a brief account of the evolution and the state of collective bargaining in Spain.

The achievements of the flexibilization policy in terms of collective bargaining have been scarce. Starting from 1985, the year in which wage moderation was sought through the gathering of national agents including unions, companies and the government, collective agreements were discussed focusing on the way salaries were being negotiated, which was the centre of the debate. This negotiation has tended to introduce an upward bias in the determination of wages, limiting the options for negotiation in working conditions open to workers when dealing at business levels and to prevent the negotiations from adapting to the circumstances of each company. In short, the main consequence was creating a very unflexible and rigid system for collective agreement.

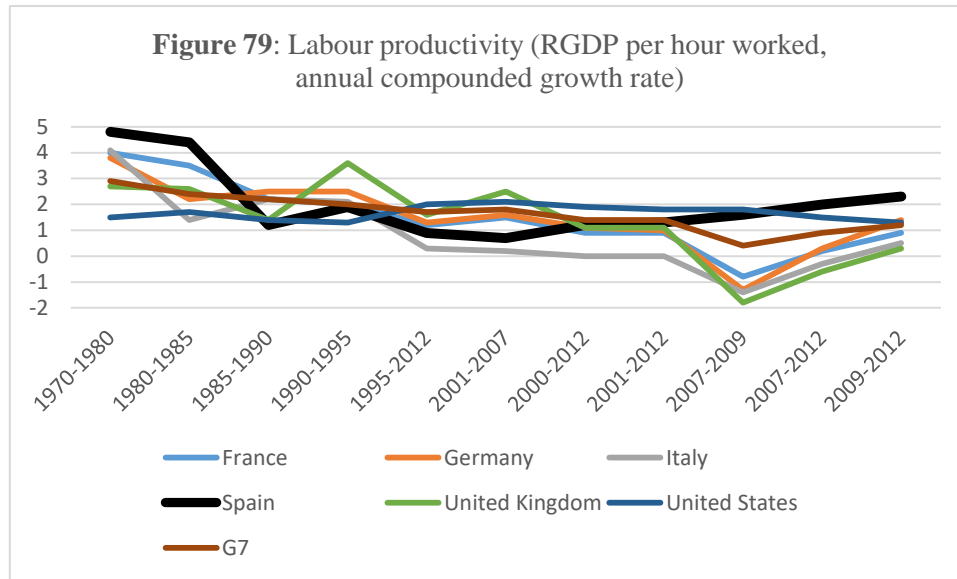
Since the labor reform of 1994, and with greater intensity in 1997, labor laws have sought to improve the self-regulation of labor relations, to give more prominence to collective bargaining, broadening the possible scope of decision of the parties, and to order and simplify the complex trading system. What has been achieved so far is, however and despite the theory, quite limited. There continues to be little flexibility, rigidity and, above all, little adaptation to the current conditions of the world economy and the needs - laboral, technological and industrial - of the present moment, and this largely explains how the evolution of productivity, both labor and TFP productivity, has been lower than in other neighbouring countries, both before the Great Crisis as more recently, especially after the stabilization in the fall in employment and GDP that occurred after the crisis¹⁷⁵.

In short, labor flexibility has advanced throughout the period, but creating important distortions in the labor market that have ended up affecting the Spanish economy and productivity enormously. These labor distortions are one of the last causes of the downward trend in the growth of labor productivity in Spain in recent decades, greatly affecting the economic development of Spain and the current system which remains unfair - by dividing the population between privileged employees and non-privileged ones - as well as inefficient - as shown by the high unemployment data -. Therefore, the labor system in Spain continues to be an open problem facing the requirements of a world in a rapid process of technological advance and internationalization of the economy. In the following comparison, labor productivity in Spain only increases after the Great Crisis of 2008, which means after a total collapse of employment.

unemployed for less than a year, thereby consolidating the dual nature of the Spanish labour market. A further reform took place in 2002, leading to a minor reduction in hiring costs" See: Boldrin, Conde-Ruiz and Giménez (2010)

¹⁷⁴ From Hospido and Moreno-Galbis (2015)

¹⁷⁵ "[...] firms having signed a collective agreement at the firm level perform better, in terms of TFP, than firms subject to a sectoral agreement or not subject to any agreement at all": Hospido and Moreno-Galbis (2015)



3.3.1.1 Cheap and temporary labour: low productivity, low wages and low promotion

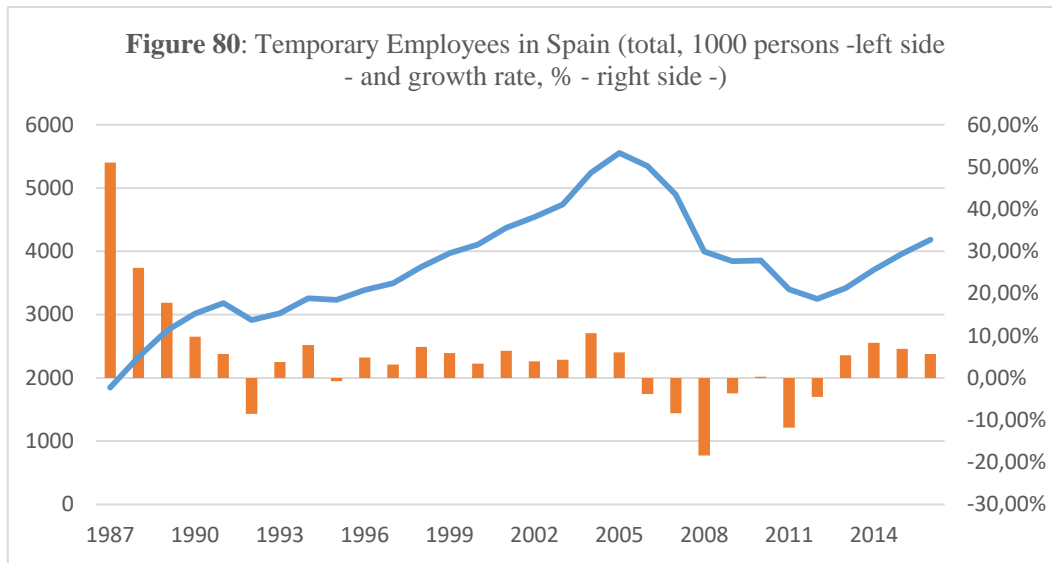
As we have explained just before, the Spanish labor system went from being a fairly monolithic system, intervened and protected, to being a more liberalized system over the years, but at the same time creating a dual hiring system, with permanent contracts, very similar in terms of benefits to the previous and old traditional contracts, and temporary contracts, much more insecure, with fewer guarantees and protection and less attractive in terms of salary.

The tendency of the Spanish economy has also been to have a dual impact over the different groups of employees based on their specific labor contracts; that is to say: crises - especially since 1984 - have tended to affect more deeply temporary employment contracts, more linked to the service sector or, later, to construction, as well as easier to rescind, especially in those very seasonal sector directly related tourism. From a sociological point of view, these contracts are usually contracts for people with less education, younger population or immigrants – In the following section I will discuss more in depth this issue -. These population sectors tend to suffer most during crises, as exemplified very clearly by the last Great Crisis of 2008.

In addition to the previous issues regarding the duality of the Spanish labor system and the greater impact that this duality has on different population groups, another point to take into account has been the evolution in the creation of contracts in recent years. Since the end of the 80s a trend started coinciding with the creation and development of the Great Bubble: temporary contracts heavily expanded, having much higher growth rates than permanent ones, whose tendency was also to grow, but moderately and with periods of significant stagnation. The growth of temporary contracts became especially high starting from the late 90s, coinciding with the period of greatest euphoria and expansion of the Great Bubble and reaching its peak in 2006.

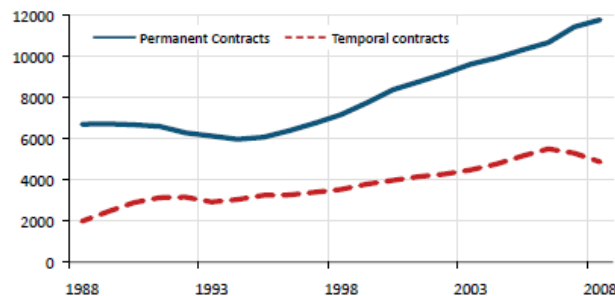
Following the crisis, there is a clear trend towards a massive destruction of jobs relating to temporary contracts, which have fallen much more than the permanent ones. It is true that permanent employees also lost their jobs, but surely they were much less affected by the crisis than temporary contracts. This is mostly due to the fact that in the Spanish dual labour system it is certainly much more complicated and expensive to rescind a permanent contract, so when companies have to choose between firing one employee or the other, they will tend to fire the one with a temporary contract, just based on a cost-based analysis. It is also interesting to see how

after the worst moments after the crisis, around 2011, temporary employees started to strongly grow again in Spain, with growth rates similar to those achieved before the crisis. As well as firing costs are lower, hiring ones are also lower for temporary contracts, so these kind of contracts will fluctuate much more based on the wings in GDP and employment.



This graph also shows very clearly the increase in salaries in both permanent and temporal contracts before the crisis. As it can be seen very clearly, permanent ones tend to be higher, especially after the valley that they reached during the mid-90s.

Figure 81: Permanent vs. Temporary Employees



The main conclusions regarding derived from the analysis carried out in this section are:

- The several labour reforms in Spain have created and consolidated a dual-labour system¹⁷⁶ that has remained in line with the needs of the economy and its productive system, based in the services sector, in tourism and construction¹⁷⁷. During the last stages of the Great Real Estate and Housing Bubble, the Spanish economy has tended to create

¹⁷⁶ To this we must add other labor trends of a more general nature in developed societies such as technology, automation, robotization and, increasingly, Artificial Intelligence. This is giving rise to a process that leads to the so-called "gig economy", which the temporality is taken to its maximum expression, a work situation in which the employee will be hired punctually for sporadic work in which he will provide everything necessary for the activity. The employee performs a service, puts his knowledge, his workforce and the precise means, charges, gives a percentage to the mediating company and you will wait for the next job.

¹⁷⁷ And recently, also in companies such as Correos: "The public company uses temporary employees to compensate for the departure of officials, in free fall (-73%) since 2001. Almost three out of 10 workers are eventual": Valero, Marina. Correos emplea por primera vez a más trabajadores eventuales que a funcionarios. *El Confidencial*. 10.05.2018 – 05:00 H. https://www.elconfidencial.com/empresas/2018-05-10/correos-precariado-empleo-funcionarios-contratos_1561299/ (Accessed 2018-05-23).

many more temporary jobs, and much less permanent jobs, even if much fewer from the latter as compared to the former have been lost after the crisis.

- Temporary contracts are especially linked to young people, immigrants or people without or with low levels of education. The considerable increase in employment that occurred in the early 2000s was mostly based on the increase of temporary contracts in low productivity and low-skilled jobs, mainly in services, tourism and, very especially, construction. This fact very much helps explaining indeed the low growth of productivity in Spain during the period of greatest growth in employment and GDP¹⁷⁸.
- Firms can adjust their situation internally either through commitment to a collective agreement or by adjusting the number of workers. In the case of Spain, firms have opted to destroy in a massive way temporary positions since the Great Crisis¹⁷⁹. Since the Great Crisis of 2008, unemployment has especially affected temporary employment, which had grown enormously in the previous period of boom, and this employment, as we have said, is associated with low productivity jobs. Therefore, after the Great Crisis, the enormous increase in productivity experienced in Spain is the product of a process of "economic selection"¹⁸⁰: only the best, the most productive maintained their contracts, and these were mostly permanent contracts, which are in sectors of higher performance and productivity, and the best¹⁸¹ or the most useful among those with temporary contracts¹⁸². This fact explains why after very low levels of labour productivity growth before the crisis, productivity growth suddenly peaked after the crisis, not only due to a decrease of employment, but also due to this "economic selection" where only the best or most useful were in general able to maintain their jobs.

3.3.2 *Your gates shall be open continually; day and night they shall not be shut. Massive influx of labour needed to keep the pool afloat*

The massive influx of immigrants that arrived to Spain since the 1990s has been one of the major distorting factors in the Spanish economy and in the labor sector before and after the crisis. This fact, which is intimately related to the previous fact of huge growth of temporary wages, also helps to explain the low productivity growth levels in the Spanish economy during the years of real estate euphoria and the brief but intense rebound after the crisis.

The following graph, which was already seen during the first part, shows how population growth rates were decreasing after the late 60s, reaching a minimum during the late and early 90s. The trend changes towards a very moderate growth during the late 90s, but the real change takes place in the early 2000s, when a massive influx of immigrants enter into the Spanish economy as a source of cheap labor. This influx of people, which caused the Spanish population to grow year after year at rates that had not been known since, at least, the 60s, coincidentally lasts almost as

¹⁷⁸ "[...] the share of temporary workers is negatively correlated with TFP performance during the considered period, 1995 – 2012. Firms with a larger share of temporary workers are associated with poorer performance in terms of TFP": Hospido and Moreno-Galbis (2015)

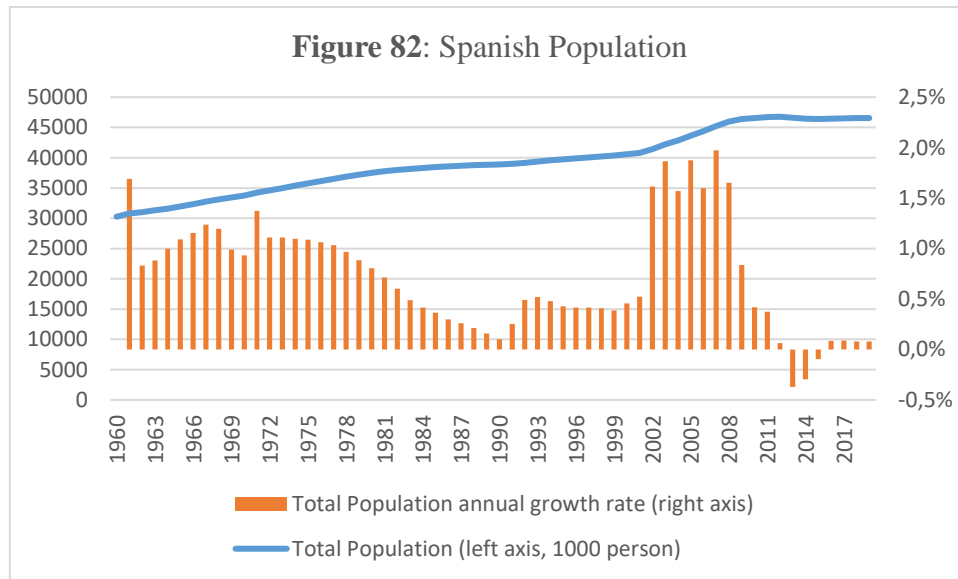
¹⁷⁹ From Hospido and Moreno-Galbis (2015)

¹⁸⁰ "In sum, the 'Spanish productivity puzzle' does not respond to permanent factors and results rather from massive job destruction (particularly temporary Jobs) and an increased weight of large firms displaying better TFP performance. Average total factor productivity has been deteriorated during the crisis period": Hospido and Moreno-Galbis (2015)

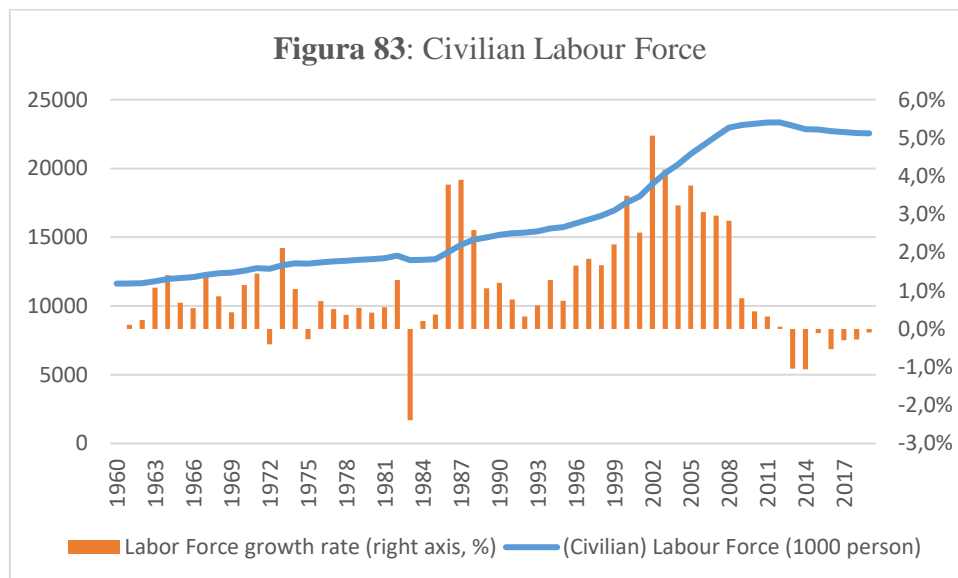
¹⁸¹ "[...] while the share of temporary workers is negatively correlated to TFP during the whole period 1995 – 2012, when we focus on the crisis period, the sign of this correlation is reverted. Again, compositional changes in the population of temporary workers during the crisis (the least profitable positions have been destroyed between 2007 and 2012) can justify the sign reversal": Hospido and Moreno-Galbis (2015)

¹⁸² In addition to this fact, there may also be psychological-social reasons: after a great economic crisis and a massive fall in employment, employees, for fear of losing their job, can start working more and more consistently because otherwise They could lose their job themselves.

long as the euphoria during the peak of the Great Bubble. After the Great crisis, population growth in Spain began to decrease, even being negative from 2010 to 2015, something that was also not known in Spain for half a century. This fact was mostly due to the massive outflow of immigrants - although also of many Spaniards - after the Great Crisis of 2008.



As we also showed at the beginning of this work, the massive arrival of immigrants greatly increases the labor force, which during the first half of the 2000s was absorbable by the system thanks to the development of the economy driven by real estate speculation. However, after the crisis and the fall in employment as well as the massive rise in unemployment, many of these people are left without work and therefore have to leave the country for lack of better economic conditions. As can also be seen, labor force decreases after the crisis, with negative growth rates, and since then it has remained stagnant.

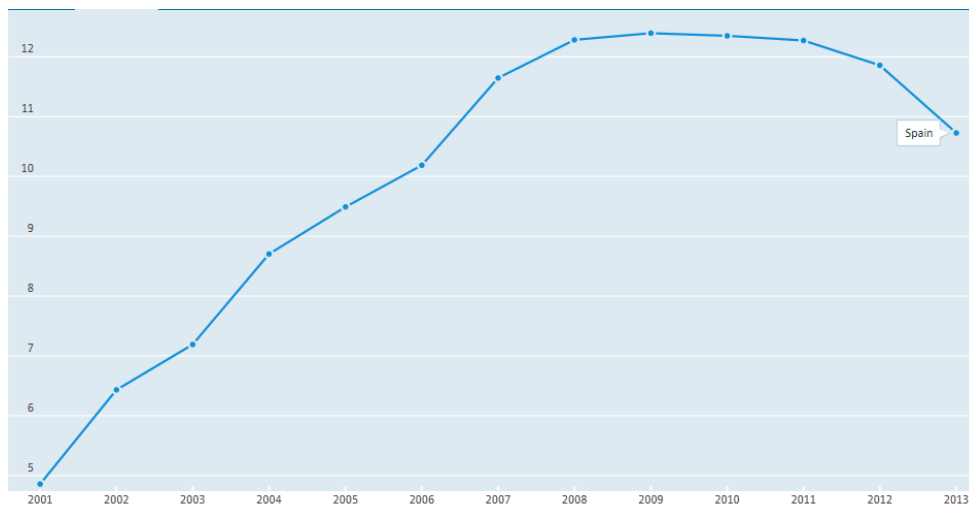


In order to better perceive the magnitude of the migratory influx in Spain, we show below a diagram on the evolution of the Spanish foreign population - that is, those who still maintained the nationality of their country - as a percentage of the total population¹⁸³. The graph certainly

¹⁸³ Data extracted from the OECD database: “The foreign population consists of people who still have the nationality of their home country. It may include people born in the host country. The difference across countries between the size

shows the spectacular increase of foreign population in Spain as a percentage of the total population from 2001 to 2008, after which it stagnates and begins to decrease considerably. Spain goes from having less than 5% of foreign population in 2001, to more than 12% only six years later. It is therefore an excessive increase in a very short period of time, which, again, coincides with the time of euphoria of the Great Real Estate and Housing Bubble. After the crisis, a large part of this population would immigrate to other European countries or return to their countries, as they were deprived of employment and any employment opportunities in Spain. This population was mainly employed in services, tourism and construction, the sectors that were more affected by the crisis, and therefore they were those employees with temporary and precarious contracts. That's why they suffered – among other groups - the greatest drop in employment after the Great Crisis.

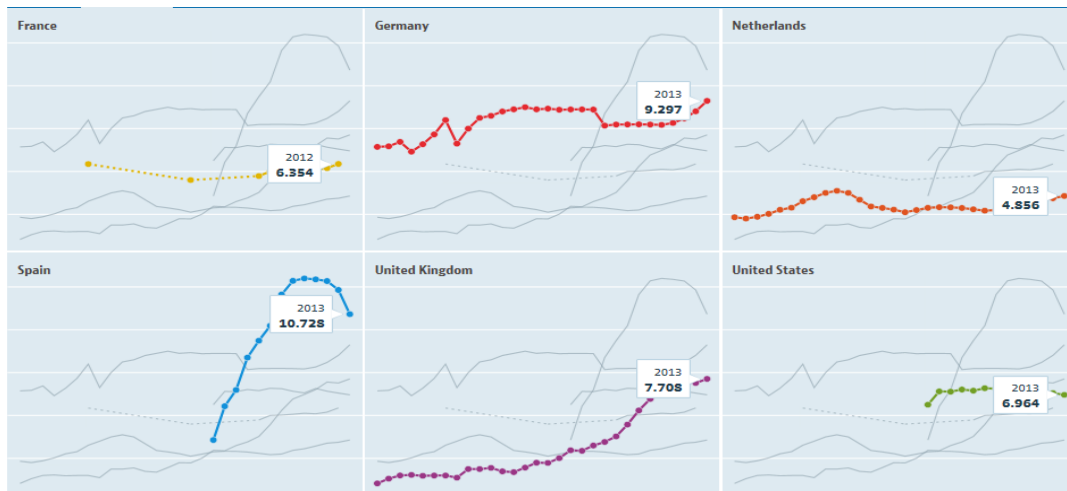
Figure 84: Foreign population in Spain (as % of total population)



Comparatively with other countries in the area, the disproportion of the migratory influx in Spain is much better seen. Countries traditionally targeted by immigrants from around the world, such as the United Kingdom, France and Germany, saw their rates of foreign population increase, but the increase is much smaller and more moderate over time than the one happening in Spain. The special case of Spain is that it goes from having one of the lowest levels of foreign population among the large countries of the European Union, to take the lead, with a higher percentage of foreign population than France, Germany, Holland, the UK and the US, and this achieved only in six years. This policy of almost total opening of Spain to foreign labor, in addition to low qualification, will mean a profound change and a huge economic and social shock, with obvious long-lasting consequences.

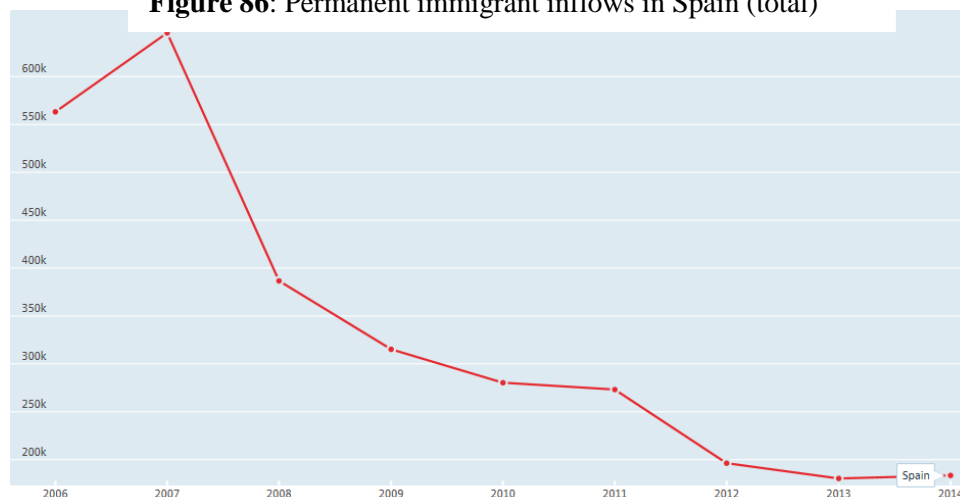
of the foreign-born population and that of the foreign population depends on the rules governing the acquisition of citizenship in each country. This indicator is measured as a percentage of population". Foreign Population. *OECD Statistics*. <https://data.oecd.org/migration/foreign-population.htm#indicator-chart> (Accessed 2018-05-23)

Figure 85: Foreign population (as % of total population) – Comparison



The trend in terms of foreign population changes completely after the Great Crisis of 2008. The following graph shows the “permanent immigrant inflow¹⁸⁴” and it can be perceived how the peak is reached just before the Great Crisis, in the moment of maximum euphoria and expansion of the Great Real Estate Bubble, in the year 2007. From then on there is a continuous and intense descent of the entrance of immigrants in Spain, which is logical since it was a period of rising unemployment, massive fall in real GDP and employment; thus, job opportunities for many of them were non-existent. In addition, those immigrants, as we have said, were employed in sectors of high temporality, like tourism, and in construction, which sank after the crisis, and because of the productive structure of the Spanish economy - which we will deal with more in depth later on - there was no capacity to absorb this influx of immigrants who had arrived in Spain once the crisis came and the excess in employment linked to the speculative bubble disappeared. The crisis transformed Spain in a matter of few years from being one of the countries with the most foreign population, to become, again, a country of emigrants, this time both Spaniards and foreigners, who could no longer stay due to the weak economic situation.

Figure 86: Permanent immigrant inflows in Spain (total)



¹⁸⁴ Data extracted from OECD data base: “Permanent immigrant inflows cover regulated movements of foreigners considered to be settling in the country from the perspective of the destination country. They cover regulated movements of foreigners as well as free movement migration. The data presented are the result of a standardization process that allows for cross-country comparisons. This indicator is measured by numbers of permanent inflows”.

This increase in immigration, based on economic indicators, but also from a social and political point of view, is perhaps the greatest social transformation experienced by Spain. In some regions, in the peak of the immigration flux, 20% or more of the inhabitants were natives from other countries. For a country like Spain, this massive influx of immigrants is an almost unique fact due to the traditionally low rates of immigration in Spain, precisely because it is a less economically powerful country, it had thus remained a country of emigrants, rather than of immigrants. During the first half of the 2000s, the labor mark flourishes thanks to cheap credit and at the same time, low productivity activities become profitable pushing real estate prices up in such a pace that almost any construction project becomes viable. The active population, as we have already seen, increases at a rate almost never seen in another country, and in little more than a decade it goes from 16 million to 23 million, an astonishing increase, that will only stop and even decrease as powerfully as it rose after the Great Crisis¹⁸⁵.

Therefore, the conclusions that we should draw are:

- At the end of the 90s and at the beginning of the 2000s, Spain received a massive influx of immigrants, something unique in the history of a country like Spain, which used to be a country of emigrants rather than immigrants, despite other European countries. This fact will become one of the greatest social and economic changes in Spain, especially in terms of active population and labour increase.
- One of the causes of the massive influx of immigrants - as explained in the section dealing with the creation and development of the Great Bubble - was trying to fill the cheap, mostly temporary and low-skilled jobs with an equally cheap labor within a period of powerful growth on employment and GDP during the years of speculative euphoria. In addition, a second reason was that this same cheap labor was also going to be the final consumer, especially with regards to the same real estate assets that they were going to need to live. Therefore, new immigrants helped the Spanish speculative process both as consumers of housing assets as well as labor supply for building them.
- As immigrants are temporary and low-skilled workers, productivity rates remained, in part due to this fact, extremely low during this period of high employment growth since, as already mentioned, the jobs created were not in high-productivity sectors; they were rather being created in the construction sector, in services and in tourism-related areas¹⁸⁶. After the Great Crisis, many of these low productivity jobs were eliminated, and only the most productive or economically useful were maintained, which explains the rise in labor productivity after the Great Crisis (the "productivity puzzle"). In the most recent news, after the stabilization of the economy, a tendency similar to the one already lived is perceived again, which shows that many of the problems have not been corrected at all.

3.4 Total Factor Productivity (TFP) and innovation: bad policy leads to a bad model, and otherwise

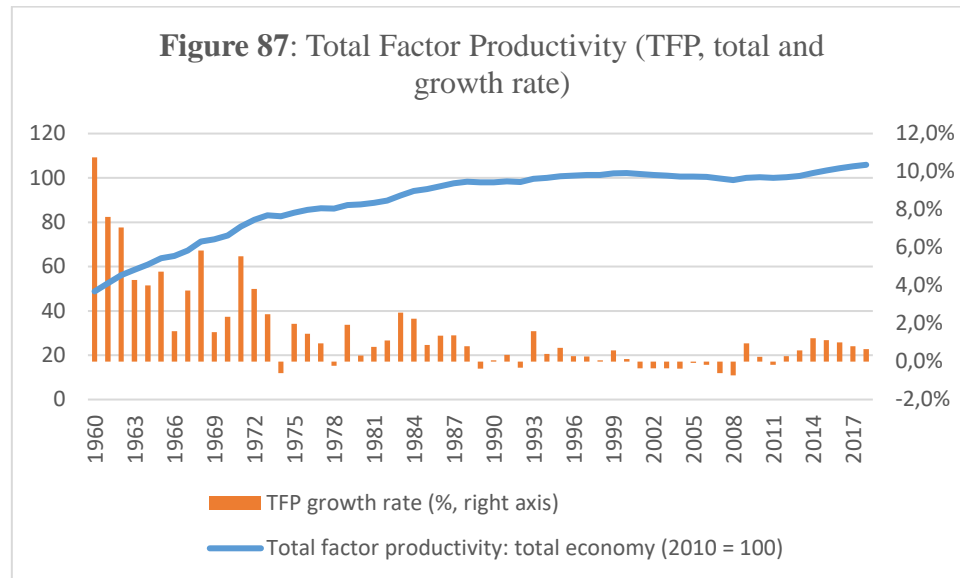
Apart from the interrelations between growth in TFP and labor productivity, which also means an intense relationship between TFP growth, the labor System and temporary and permanent jobs, there are also other causes intrinsic to the behaviour of TFP that should be separately studied here in more detail. Total-factor productivity which can also be called multi-factor productivity is the portion of output not explained by traditionally measured inputs of labor

¹⁸⁵ From Álvarez (2016)

¹⁸⁶ "Mas and Quesada (2006) point towards the construction sector, the wholesale, retail trade and repairs sector and hotels and catering sector, as the main responsible of the poor performance of Spanish productivity over the period 1995 – 2004": Hospido and Moreno-Galbis (2015)

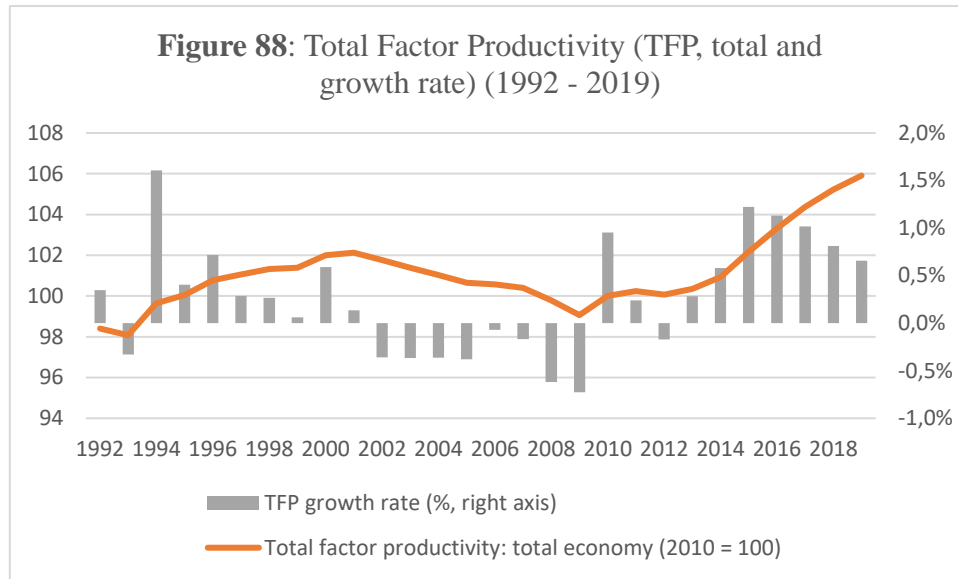
and capital used in production¹⁸⁷. One of the key points of Total factor productivity is that it is usually used as a measure of economic efficiency and accounts for part of the differences in cross-country income per capita, so it usually helps understand and explain the differences between countries.

If we look at the evolution of TFP since the 1960s - as we did in the first part - we see that its tendency has been to stagnate, with extremely low growth rates since then and decreasing over the years, with only some exceptional upswings in some very specific moments:

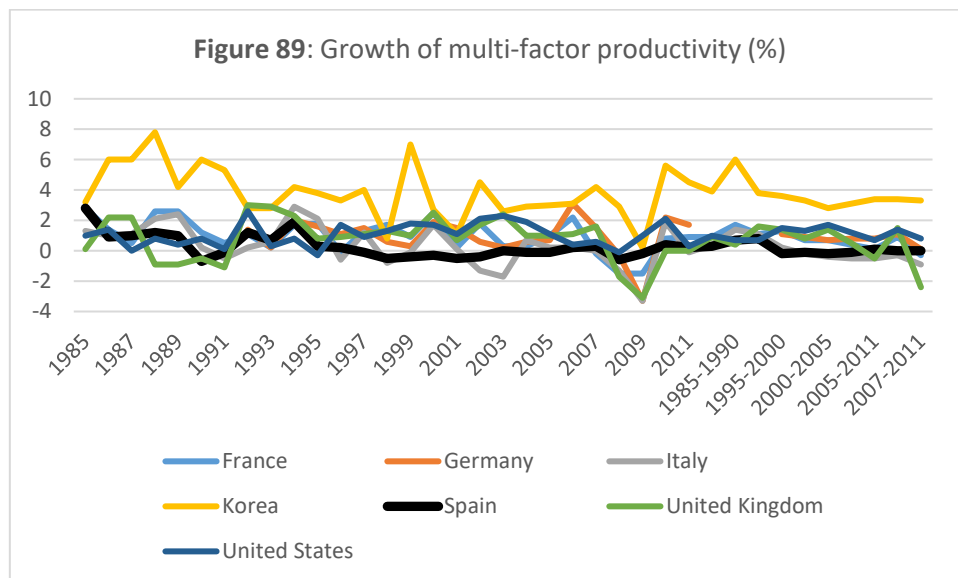


Looking more closely at the most recent decades, in which the Spanish economy grew enormously, as well as employment, we can see that TFP during the period of greatest growth of Real GDP and employment actually fell. In the same way that we showed with labor productivity, TFP also decreased in the first decade of the 21st century, and then it started growing again after the Great Crisis. However, in the most recent times we see a decrease in its growth rates, similar to the normalization that was happening with labor productivity after the breakout after the Great Crisis.

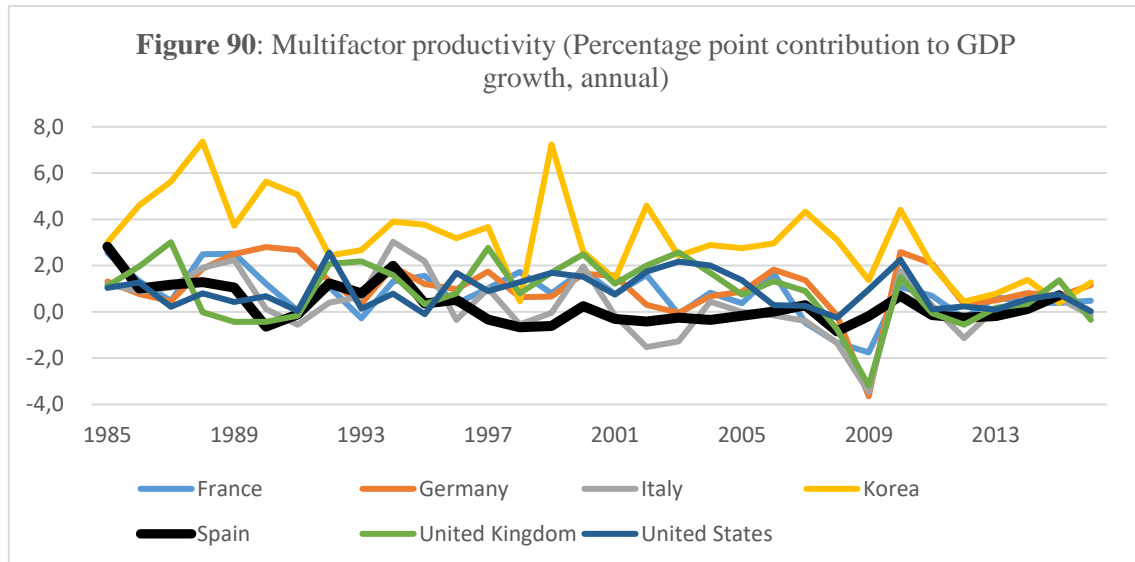
¹⁸⁷ “TFP is (usually) calculated by dividing output by the weighted average of labour and capital input, with the standard weighting of 0.7 for labour and 0.3 for capital”. See: Total Factor Productivity. *Wikipedia*. https://en.wikipedia.org/wiki/Total_factor_productivity (Accessed 2018-05-23).



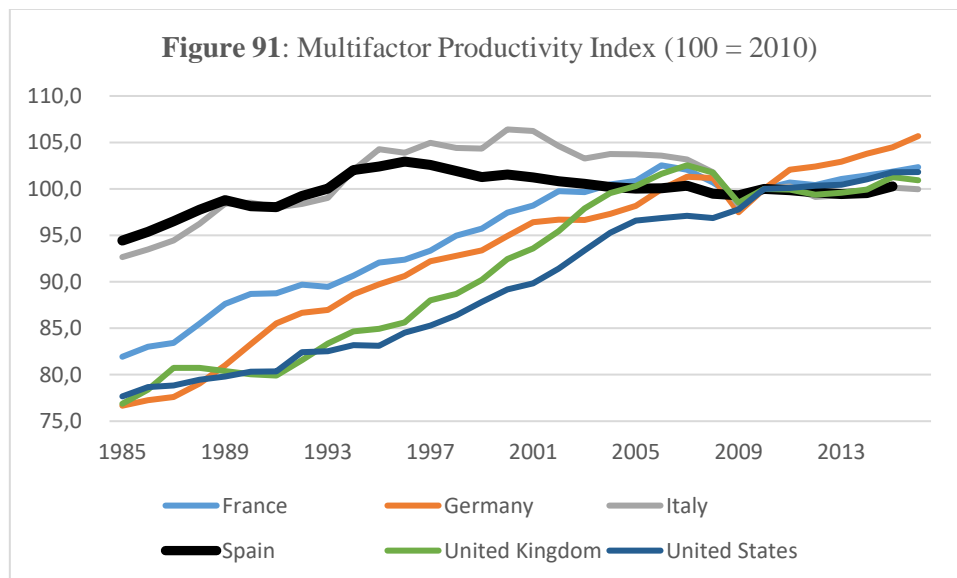
Spain has therefore gone from having high TFP growth rates in the 60s to being one of the countries with the lowest growth in the TFP, being completely stagnant at a very low level for most of the 90s and 2000s, which explains to a large extent Spanish low wages, low labor productivity - as we have shown before - and low economic, technological and industrial development, at least when compared to other neighbouring nations.



Also, as a percentage contribution to GDP growth, Spain has one of the lowest rates among developed countries. It is in this case also especially disturbing the very low percentage contribution rate that the TFP had over GDP during the years of real estate euphoria.



In addition, the improvements of Spain in productivity since, at least, the decade of the 80 have been very moderate; that is to say: TFP has remained at levels very similar to those that existed during the 80s, while in other countries TFP has been increasing constantly through these decades. In addition, TFP has even witnessed a long period of decline during the 90s and the 2000s, a fact that, apart from the fall during the Great Crisis, has not occurred in other neighbouring nations. This fact therefore puts Spain in a position of "productive delay" compared to other countries. The behaviour of TFP is closely linked to the Spanish productive system and its conversion to a services, tourism and construction-based economy, starting precisely in 1985 and lasting until its end during the Great Crisis of 2008. This issue will be the object of our analysis in the next section.



Below I will explain some causes that may explain this evolution of TFP, both in the long term and in the short term. These causes¹⁸⁸ are undoubtedly key to understand the development and behaviour of the Spanish economy in the last decades, and correctly understanding them and, hence, trying to find the correct solutions to these issues, can certainly strengthen TFP growth in the future. These causes or essential aspects are in many cases idiosyncratic aspects coming from

¹⁸⁸ For some of these causes, I'm referring to some of the different factors affecting TFP and masterfully exposed in Pilat (2005). I used them as a useful guideline to better organize this section.

the specificities of the Spanish economic and productive model; in other cases, these causes are general trends that can be found within almost all developed economies. Some of those causes are the following ones:

- (1) A productive and economic model that, from the beginning of the late 70's and especially the beginning of the 80's, focused on tourism, services - especially those with low productivity and innovation rates - and, from 1985 to 2007, in real estate speculation. This explains the low productivity rates of the Spanish economy during the boom years, and this change of model was also behind the undoing of much of the Spanish industrial network that did really exist in the late 60s and the first 70s.
- (2) The late and small development, when compared to other developed economies, of Information and communication technologies (ICT), which according to several¹⁸⁹ studies¹⁹⁰, explain to a large extent the relative productive and technological backwardness in Spain, and therefore the low TFP growth rates.
- (3) The very discreet role of innovation, research and R&D, as well as the investment rates in these aspects of the economy, both by the Spanish private sector and by the public sector. Spain certainly lacks a large technological and industrial investment plan or, at least, aid to companies in the sector¹⁹¹, to which is added a regulatory and tax framework that does not help entrepreneurship in these sectors, despite having good potential in Spain: some very good universities of engineering and technology - although somewhat archaic -, good professionals and some exceptionally leading research centres.

3.4.1 Historical complexes, opportunism and short-termism: the deliberate process of deindustrializing Spain, and the consolidation of a model based on low-productivity services, cheap tourism and speculative construction

After the death of Franco, although especially at the beginning of the 80s, in large part with the negotiations of Spain for entry into the European Community, the Spanish government, by a mixture of political opportunism, historical complexes and short-termism, decided to transform the economy and, instead of betting on technology, innovation and cutting-edge industrial development, decided to bet on tourism, services and, afterwards, construction. The socialist government of Felipe González, who had been protected and financed by the German

¹⁸⁹ “Pilát (2005) [...] attributes the weak performance of TFP to the little contribution to productivity of the iCT-producing sector, the weak growth of TFP in ICT-using services, the relatively low investment in R&D, the strong regulations in the retailing sector [...]” Quoted in Hospido and Moreno-Galbis (2015)

¹⁹⁰ “Mas and Quesada (2006) [...] underline the incapacity of Spain to extract all the benefit from large improvements in worker’s training and educational levels. From their point of view, the negative contribution of TFP to economic growth in Spain is due to small presence of ICT producing sectors, the relative small share of ICT-investment on total investment, the low penetration of ICT-assets, the higher cost of ICT, the low use of ICT at schools and the very poor technical formation and training”. Quoted in Hospido and Moreno-Galbis (2015)

¹⁹¹ There is in fact a comprehensive study that shows that the great part of the low growth of TFP from 1995 to 2007 was due to the bad allocation of resources and a bad public policy regarding incentives: “Spanish GDP grew at an average rate of 3.5% per year during the 1995-2007 expansion, well above the EU average of 2.2%. However, this growth was based on factor accumulation rather than productivity gains as TFP fell at an annual rate of 0.7%. Using firm-level administrative data for all sectors we show that deterioration in the allocative efficiency of productive factors across firms was at the root of the low TFP growth in Spain, while misallocation across sectors played only a minor role. We show that within-industry misallocation of production factors increased substantially over the period in all industries. Absent such deterioration, average TFP growth would have been around 0.8% per year, in line with the growth of the technological frontier. Cross-industry variation reveals that the increase in misallocation was more severe in sectors where the incidence of regulations is greater. In contrast, sectoral differences in financial dependence, skill intensity, innovative content, tradability and the intensity of capital structures appear to be unrelated to changes in allocative efficiency. All in all, the observed high output growth together with increasing firm-level misallocation in all sectors is consistent with an expansion driven by a demand boom rather than by structural reforms”: Hospido and Moreno-Galbis (2015)

Social Democracy¹⁹² until becoming president of the Government in Spain, became the perfect interlocutor to carry out reforms that in the long term would be extremely bad for the Spanish economy. These reforms would later be consolidated, again for similar reasons, although in this second stage much more based on the previous inertia and also in view of the entry of Spain into the monetary Union. This process of “economic transformation” was, besides, carried out by the different governments that came to power in Spain, regardless of their political sign or ideology.

(1) And ye shall serve: betting on a low productivity and low innovation services sector:

In relation to the services sector and its development, it strongly increased its share in both the total product, in constant euros, and in the total employment of the Spanish economy in the period from 1975 to the previous years to the Great Crisis¹⁹³. The sector, as a whole, grew in a continuous and relatively stable way in these years; and it has done so at a somewhat higher rate in the subset of services not intended for sale - which includes Public Administrations, public education and health and other social services provided by the public sector free of charge or at prices below their costs of production - that in the subset of services intended for sale. The advance of the former was particularly intense in the 1980s and in the first part of the following decade, as a consequence, mainly, of the structuring of the new State of Autonomic Regions and derived from the boost that the activities related to the Welfare State received from the socialist governments. Subsequently they had to moderate their growth in the effort to reduce the budget deficit.

Although this trend towards services is typical of developed nations, it is also true that in Spain the change was particularly intense and it occurred in a very short period of time, at the same time that Spain was putting the focus on the low productivity service sectors¹⁹⁴. In addition, service activities have tended to be characterized by a relatively high intensity of work, low levels of capitalization and weak rates of technical progress and, consequently, by slow rates of productivity advancement; and these activities, at the same time, have tended to be activities that are little exposed to foreign competition and protected from internal competition by their very nature and, frequently, by the reserve of markets in favour of public monopolies or private monopolies or oligopolies, with public interventions and regulations. The services sector as a whole has shown a low average productivity rate, notably lower than those recorded by the industry and agriculture and lower than those observed in the service sectors of other European countries within the European Union. At the same time, the services sector in Spain has been affected by multiple interventions and regulations limiting competition. In the services sector average progress of productivity is lower, labor product unit costs tend to rise rapidly and wages tend to be lower; these abundant limitations on competition facilitate the translation of cost increases into price increase, making the sector an important and persistent source of inflationary tension, generating income transfers in its favour and damaging competitiveness of other industries subject to foreign competition that are faced with internationally-given prices¹⁹⁵.

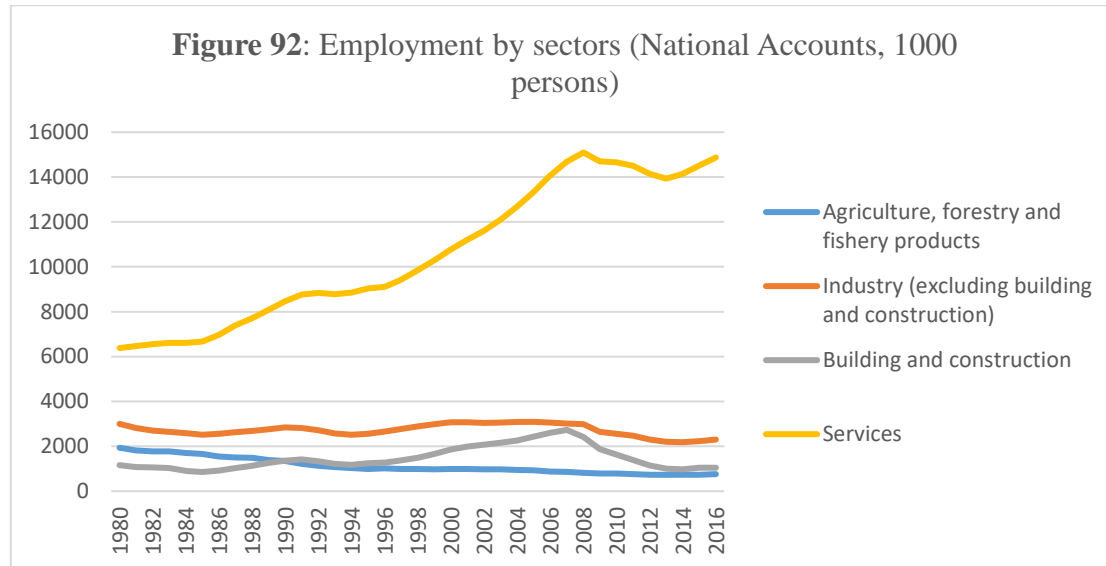
¹⁹² This was published in the WikiLeaks papers regarding the Spanish Transition, but it has also been proved through many other sources: The Guardian team. German secret service funded foreign parties funded politics. *The Guardian*. Wed 2 Feb 2000 01:33 GMT <https://www.theguardian.com/world/2000/feb/02/germany.johnhooper> (Accessed 2018-05-23).

¹⁹³ Check Diagram 11.1 in Rojo, Luis Ángel (2002) for further insights on the issue

¹⁹⁴ “[...] almost 70% of the gross added value and 80% of the sector's employment corresponds to branches with low rates of productivity growth. This group includes, together with services not intended for sale, activities such as commerce, hotels, restaurants, cafes and bars, real estate rentals, interior transport and education and health services for the market”: Rojo, Luis Ángel (2002)

¹⁹⁵ “In Spain and for the period 1975-2000, the average annual growth of the services deflator has been higher than those recorded by the deflators corresponding to the other branches of activity: 10.3% in services compared to 10, 1 in construction, 7.8 in industry and 6% in agriculture”: Rojo, Luis Ángel (2002)

The following graph shows very clearly this increase in the services sector in Spain since the 80s, at the same time that the increase in the construction sector is also clearly perceived. As it is logical, this extreme process of changing the Spanish economic model in relatively few years is not "casual" or "natural", but rather a conscious process implemented by the different Spanish governments in a mixture of short-termism, easy money, opportunism, clientelism and pressures and favours from third nations, especially within the process of the European industrial divergence after Spain entered into the European Community in 1985¹⁹⁶.



This trend towards the conscious expansion of a low-productivity service sector, with inflationary tensions and with barely any growth in innovation that began in the mid-1980s, especially at the expense of industrial, manufacturing and technological development - that existed and had a not insignificant weight on the Spanish GDP at the end of the 1960s; this sector could have simply been modernized - helps explain this considerable decline of TFP since this time, as well as the low levels of labour productivity and also of wages, GDP per capita and employment¹⁹⁷.

(2) The wealth of the nations will be brought to you: “sun, beach an fiesta” as a cheap formula for tourism:

Within the services sector the emphasis was placed on tourism and on services related to it¹⁹⁸. It was a sector in which Spain had enormous potential due to its objective characteristics: many kilometres of sea of great quality and excellent climate and cuisine. After the opening of Spain to the world economy starting in the 50s, tourism was gradually increasing in Spain. Yet,

¹⁹⁶ Another important factor to consider regarding the development of services, divergent from that of the industry, is that the regulation in terms of liberalization, competition and openness abroad has been much less in this sector than in manufacturing, and to a large extent this has come dictation of Europe: "In the rest of the service sector, often little exposed to foreign competition and protected from internal competition by its very nature, by reserving markets in favor of monopolies or oligopolies and by interventions and public regulations, Liberalization policies have advanced, in general, late and with less intensity than in the goods markets. The external impulse has been weaker than for the latter because of the characteristics of many services and also because the effective progress of the European Union in the liberalization of services, although significant in some fields, has been quite limited": Rojo, Luis Ángel

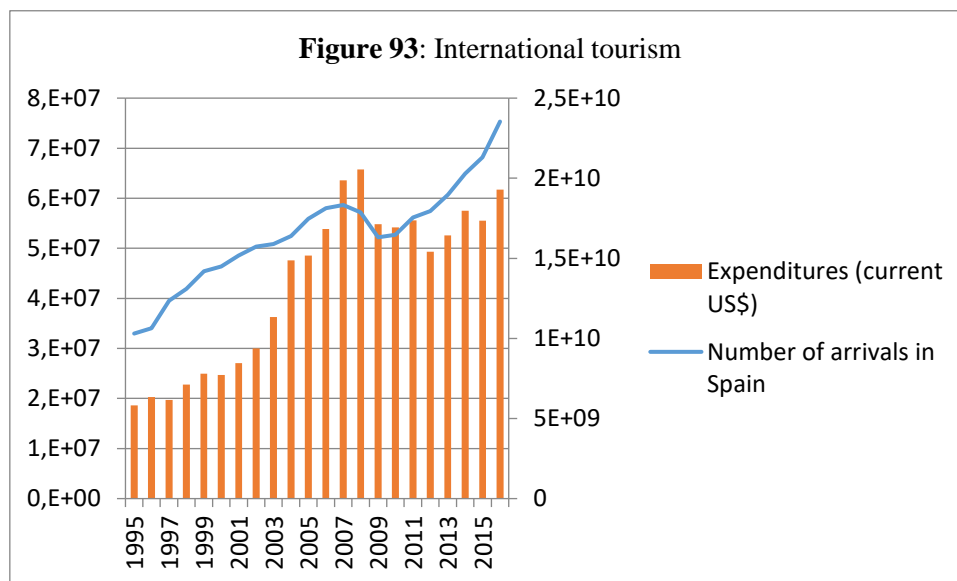
¹⁹⁷ From Rojo, Luis Ángel (2002)

¹⁹⁸ "Tourism in Spain is the 3rd major contributor to the national economic life just after the industry and the business/banking sector, contributing about 10-11% of Spain's GDP [...] Spain's foreign tourist industry has grown into the second-biggest in the world [...] In 2017 Spain was the second most visited country in the world, recording 82 million tourists which marked the fifth consecutive year of record-beating numbers [...] Spain ranks first among 136 countries in the biannual Travel and Tourism Competitiveness Index published by the World Economic Forum in 2017, matching the top position already achieved in 2015 [...] The World Tourism Organization has its headquarters in Madrid": Tourism in Spain. Wikipedia. https://en.wikipedia.org/wiki/Tourism_in_Spain (Accessed 2018-05-23).

it was in the mid-80's when the Spanish economy transitioned to make tourism one of the pillars of Spanish economic growth, betting on a sector of easy growth, with a lot of potential and that would bring a lot of money to Spain in the very short term, however without considering the medium and long term, as well as the improvement in productivity, and future issues that may – and finally did – arrive.

The kind of services that have been mostly developed in Spain have been, along with non-sale services activities such as commerce, hotels, restaurants, cafes and bars, property rentals and internal transport, all of those which are closely related to tourism and its progressive expansion. In these activities related to tourism, the progress of productivity, although being low, has exceeded that registered in the analogous subsectors of the main countries of the European Union¹⁹⁹; this could certainly be a cause of the enormous and quick increase in the sector in a very short period of time. On the contrary, trade, which has a very high participation in the sector, has reduced its relative weight as a consequence of a restructuring process to which foreign direct investment has a lot to do with it.

The next graphic²⁰⁰ serves to clearly perceive the increase in the service sector from 1995 to the Great Crisis of 2008. The trend, which can be extrapolated to previous years, shows the continuous increase in tourist arrivals to Spain as well as the expenses of tourists in Spain, that's to say: how much tourists spent in Spain which translate into Spanish revenues from tourism. Both indicators have grown considerably in the 90s - a time of great speculation in Spain, where services also increased considerably - and after an intense but short reduction after the Great Crisis, the growth rate is resumed the following years.



Although tourism is a source of income and having a developed tourism industry can be highly positive, in the case of Spain the big problem has been to create an economic system that gravitates too much around this industry, becoming especially dependent on it. In addition, this is coupled with a commitment to cheap tourism, a sun, beach and party-based tourism, with services attached to this tourism of very high seasonality, short-term perspective, very dependent on the year-over-year arrival of tourists and the climatological conditions, at the same time that it entails low productivity and innovation, low salaries, etc. As with services, the touristic sector and its incremental weight over the Spanish economy helps explaining to a large extent this growth in employment and production during the 90's and early 2000s, but also helps to explain

¹⁹⁹ From Rojo, Luis Ángel

²⁰⁰ Data extracted from the World Bank data base (see Bibliography)

and understand the stagnation of labor productivity and TFP over the last decades, as well as as the downward trend in wages.

(3) Come in the wilderness: the rapid and constant deindustrialization process in Spain. the fallacious “Industrial Reconversion”

This commitment to an economic system based on low productivity services, cheap tourism and later on real estate speculation, was in turn linked to a continuous and constant process of dismantling the industrial and manufacturing network that was so extensively developed during the 60s, which led Spain in turn to become an industrial power at the end of that time²⁰¹. Although the Spanish industry was somewhat obsolete technologically and was not as competitive as others foreign industries, mainly due to now having transitioned towards new processes and an efficient modernization, the government of the decided to change the system, rather than helping it to transition, investing in the modernization of the industry and boosting key sectors and increasing the competitive potential in Spain²⁰².

This process has had disastrous consequences both for the sustainable and long-term development of the Spanish economy as well as for Spanish productivity, prosperity and competitiveness. Once the artificial and short-term illusions brought by real estate speculation and the growth of unproductive services had dissipated, the extremely weak position in which the Spanish economy found itself appeared clearly, both in itself and in relation to other countries. This process of deindustrialization and change of economic model is at the root of the huge differences in income levels relative to other countries and in the low rate of productivity, both TFP, capital and labor productivities.

In this section I will not fully explain the historical development of this trend²⁰³; I will rather make a brief description of it, explaining what may have been the reasons for this process - which I mentioned briefly before - and I will expose through the analysis of some indicators the tendency of the economy towards the loss of industry. Finally I will end up comparing the Spanish evolution with that of other countries such as the Republic of Korea and Singapore, which from the point of view of GDP per capita and other economic indicators were very close to Spain in the early 60s, but ended up diverging greatly.

The rapid advance of the Spanish economy from 1960 until the mid-seventies had its basic engine in the development of the industrial sector, which, in a climate of progressive normalization expanded its share over total output to reach 30.8% of the total economy in 1975²⁰⁴. However, the interventionism and protectionism that conditioned, in the period, public strategies

²⁰¹ “However, the final acceleration of the process came with the signing of the Treaty of Accession to the Community of 1985, by which Spain assumed commitments of lack of commercial protection that would have to comply in a transitory period of seven years and those that came to join - as we already know- the derivatives of the 1986 Community Agreement, aimed at completing the Internal Market before the end of 1992. Spain complied with these commitments with ease, within the foreseen periods, so that, in 1993, it had concluded with success an accelerated stage of commercial opening that implied a very intense liberation of the trade of goods, excepting those affected by the Common Agrarian Policy and some industrial good, such as coal. Manufactures were the sector most affected by this rapid process of lack of protection: imports of community goods immediately increased their presence in the Spanish market, competing in prices and qualities and covering a rapidly growing percentage of domestic demand, while Spanish manufactures retreated and they did not quite make their way, firmly, in foreign markets”: Rojo, Luis Ángel (2002)

²⁰² More information can be found in Rojo, Luis Ángel (2002): “Table 11.1 illustrates the significant decline of industry within the economy as a whole, in terms of its share in both real output and employment, in the period 1976-2000. If we go down to the large components of the sector, we can see that the regression indicated refers to mining and, in a dominant way, to manufacturing industries, while the energy subsector has shown an appreciable firmness”.

²⁰³ The reader can check a brief introduction to the topic in Wikipedia: Reconversión Industrial. https://es.wikipedia.org/wiki/Reconversi%C3%B3n_industrial (Accessed 2018-05-23). For the most important time in the industrial dismantling (1983 - 1986) which coincides with the creation of the bases for the future Great Bubble, the reader can found much more information in Marín Arce (unknown).

²⁰⁴ From Rojo, Luis Ángel (2002)

and private business decisions; the productive distortions and technological backwardness that were dominant at the starting point and not yet fully corrected, and the inadequate size and organizational as well as the financial weaknesses of many companies born in the heat of the wave, had shaped an industrial structure rich in weaknesses. If this was not enough, the 1973-1974 energy crisis came to make it worse, at the same time that Spain was going through a process of intense political instability.

Therefore, the industrial sector, beset by the fall of internal and external demands, by the variations in the structure of these in response to movements in relative prices, by the strong increases in labor and energy costs and by the consequent desirable changes in the production methods, entered a phase of deep and persistent weakness, barely attenuated by an increase in export activity that reflected the contrast, already in the first part of the eighties, between a gradual improvement in world trade and a market sluggishness inside. The most striking result of all this was an intense increase in industrial unemployment, accompanied by the definitive closure of many companies. Only around 1984-1985 did the industry begin to give signals that the very hard adjustment registered in response to the crisis started some ten years earlier was about to end, although the intrinsic situation for the industry was not much weaker²⁰⁵.

Only when the process of establishing and consolidating democracy could be considered closed it began an active policy aimed at solving the problems of companies and sectors "in crisis" in view of their long-term viability. In 1983, the Socialist Party, with an absolute majority in Parliament, felt able to address a policy of "industrial reconversion" that had to affect sectors such as the steel industry and shipbuilding and that involved investments to improve the productive structure of companies, adjustments of staff under agreed conditions and an effort to reallocate surplus resources to sectors with better prospects. Another question is how inefficient these policies were in view of the weakness of Spanish industry and the amount of jobs that were lost.

This process of "industrial reconversion" along with the effective incorporation of Spain to the European Economic Community, on January 1, 1986, posed a great challenge to the Spanish industry. In addition, the member countries of the Community signed, a few months later, the Single European Act, which incorporated the agreement to complete, by December 31, 1992, the construction of the Internal Market, a space for the free movement of goods, services and factors of production; with it competition was to be increased, resulting in the elimination of the important set of factors - technical and health, administrative, fiscal, financial, etc. - that continued to hamper the functioning of a true single market within the Community. In this way, Spain had to fulfil the commitments assumed in its Treaty of Accession to the Community, signed in 1985²⁰⁶, plus those resulting from the agreement on the construction of the Internal Market for the Community; and had to comply with them in a short period of time, which concluded in 1993, at the same time that Spain was a country starting from a relatively high level of protection. The process of eliminating protectionism meant, on the side of imports, full tariff disarmament for Community products and the adoption of the Community external tariff vis-à-vis third countries (accepting the preferential agreements that the Community had signed with other areas), the elimination of non-liberalized trading systems, the renunciation of other administrative protection

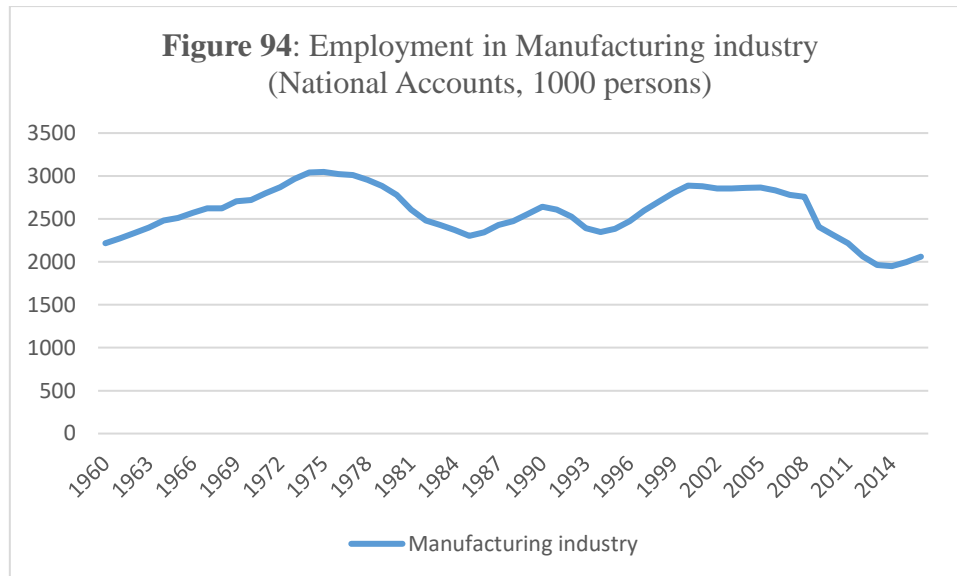
²⁰⁵ The strong increase in the weight of industry in the Spanish economy during the 60s was thanks to the help of the Spanish State: "However, a large set of industrial companies, with serious production imbalances and high and persistent losses, continued to drag situations, in the long run unsustainable, thanks to the support of the public sector either because it was originally public companies, or because, being private companies at the beginning of the crisis, the incidence of this had led to their nationalization incorporating them to the National Institute of Industry, or because they were receiving public aid to reduce their workforce and benefited from other forms of interventionism or protection": Rojo, Luis Ángel (2002)

²⁰⁶ The opening of the Spanish economy increased imports, notably reducing exports, especially industrial and technological products, which were increasingly less competitive abroad: "the percentage that the sum of exports and imports of goods and services represent over the GDP: this indicator has gone from 29.2% in 1975 to 62.2% in 2000, registering the strongest increases after the incorporation of Spain into the Community": Rojo, Luis Ángel (2002).

practices and the abolition, after the introduction of VAT, of fiscal adjustments at borders that concealed protectionist surcharges; and implied, on the side of exports, the reduction of administrative, credit and fiscal mechanisms that implemented covert subsidies to favor sales abroad.

Such a sharp reduction in protection, coinciding with an expansive cyclical phase and with an appreciation of the real effective exchange determined, in the first years that followed the incorporation of Spain into the Community, a very fast advance of imports from neighbouring European countries, whereas the Spanish industrial exports showed a slow rate of evolution; internal demand of European manufacturing imports rose very rapidly, at the expense of national production, and the external balance of trade in manufactured goods became strongly negative, worsening in almost all branches of activity²⁰⁷.

The following graph shows, for example, how employment in the manufacturing sector increased considerably during the 1960s, reaching a maximum that will never be reached, and maintaining a downward trend throughout the decade, decreasing especially after the Great Crisis. Keep in mind that the increase in manufacturing during the 90s is closely related to the development of the construction sector and despite this huge increase, employment never reached the levels seen in the sector during the 70s.



Therefore, we can say that the deindustrialization process in Spain was the conjunction of several and diverse factors, some internal and others external, others more natural and others more forced, although the process in general was conscious:

- It was decided, instead of investing in the modernization and selectivity of the vast Spanish industrial system created in the decade of the 60s, which although archaic and inefficient²⁰⁸ it was still solid and profitable, reconvertng the Spanish productive model and betting on sectors of more powerful growth in the short

²⁰⁷ "Overall, despite the improvements registered in the structure, efficiency and competitiveness of important sectors of Spanish industry in the last period, this continues in a situation of delay with respect to the European one that is accused especially in the branches of activity with more dynamic demand and higher technological requirements": Rojo, Luis Ángel (2002)

²⁰⁸ For example, we can cite the tremendous energy inefficiency, with the use of non-competitive sources (national coal) to which was added the overconsumption of hydrocarbons, and also a significant excess of staff that the need for "social peace" advised to maintain, as archaic and inefficient aspects within the vast Spanish industry.

term²⁰⁹, sectors that also required less long-term investments, such as services, tourism, and then construction, where the "Wealth Effect" could be reached faster, fast enough to, at least, win the next election.

- This process of opting for the change of model was due to a mixture of political opportunism of the new elected socialist government that, seeing that the conversion would be costly and take long-term investment plans and resources, preferred to create cheap jobs and in a short period of time. No government ever thought into building a solid industrial and technological policy for the future, and preferred the illusions and short-term effects brought by this new model. People also accepted it insofar as the "Wealth Effect" lasted.
- The entry of Spain into the European Commission in 1985 and into the Euro at the end of the 1990s meant an entry of Spain into the European Market under unfavourable conditions for the Spanish industry and manufacturing. This process finished breaking the Spanish industry and for political reasons the government did not choose to carry out policies in its defence, as it has been said. The historical complexes in Spain made it preferable to sell the industrial network rather than not to enter Europe under unfavourable conditions. The entry into the euro also meant entering a strong currency, with low interest rates, which increased imports and sank exports and caused industrial products to be imported at the expense of national production.
- A last factor that I will touch only briefly but importantly has to do with the privatizations of many of the Spanish public companies of great economic importance during the 1960s. These privatizations²¹⁰ were done in a way that was detrimental to the Spanish economy, often based on political and short-term budgets rather than the sustainability and health of the economic model and without considering all the variables against the process that started²¹¹.

This process occurred in the Spanish economy, which explains many of the problems and trends that have been seen in recent years and that arose without doubt as the speculative benefits of the Great Bubble vanished, has been somewhat conscious and premeditated, as a result of bad decisions and lack of perspective. Germany has seven times more industrial capital than Spain and, for example, with only having dedicated to industry what was invested in the real estate sector in the two years of maximum euphoria (2006 - 07), Spain would have around 50% more industry if those investments had been successful²¹². This serves to see the importance that a correct framework of incentives or the existence of an industrial capitalist class has, especially having this elite capable and willing to maintain a high investment rhythm when simpler and more speculative opportunities for profit skyrocket in the economy, as it certainly happened in Spain and might still happen.

²⁰⁹ Especially in terms of employment, even if it was of low quality, since it was necessary to compensate for the great loss in manufacturing and industrial employment that went from 3.6 million in 1975 to 2.2 today. Check also Álvarez (2016)

²¹⁰ "To achieve a good functioning of the markets, however, privatization of public companies is not enough: active policies of liberalization and deregulation are required, and the development of the latter started late and has progressed unevenly afterwards. , with advances but also with setbacks. In the eighties, the most important measures were the liberalization of rents and business hours - the latter, distorted ten years later -; but the main impulse only began in the early nineties as a reaction to the different behavior of the prices of services and industrial products, largely as a result of the very diverse competitive pressure that both sectors were experiencing. [...] Despite this positive progress, the policies of liberalization of services have not managed to enter into some sectors or have done so insufficiently, and have even registered setbacks sometimes agreed": Rojo, Luis Ángel (2002)

²¹¹ Possibly the best study on the subject, which I invite the reader to consult, can be found in Sánchez Carreira (unknown date).

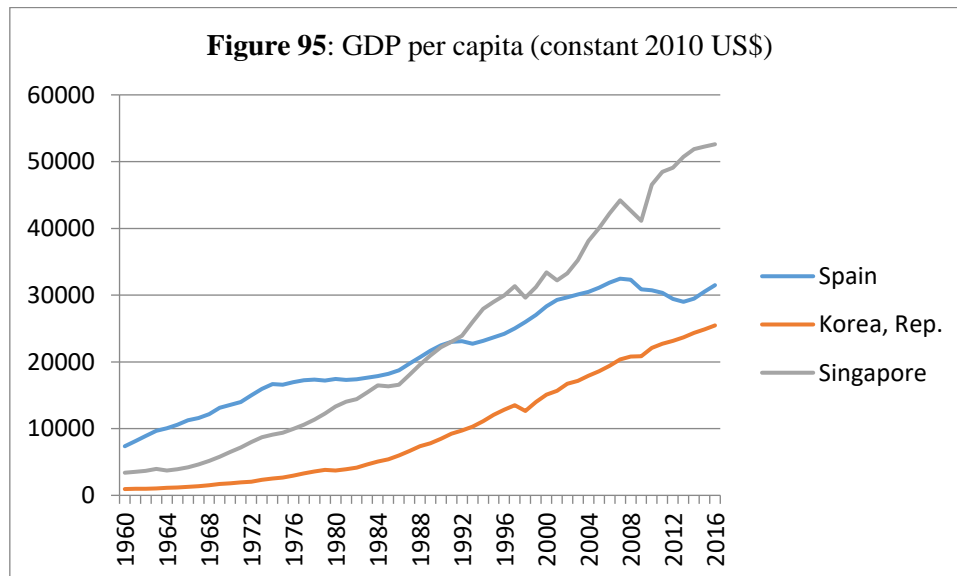
²¹² From Álvarez (2016)

(4) There is no predisposition towards error and ruin: Spain, Korea and Singapore as three examples of what should and should not be done

It is very interesting to compare the evolution in Spain with the evolution of other countries that at the end of the 50s were in an economic situation similar to Spain and that, however, due to a series of different Economic Policy decisions, have diverged enormously after the following decades.

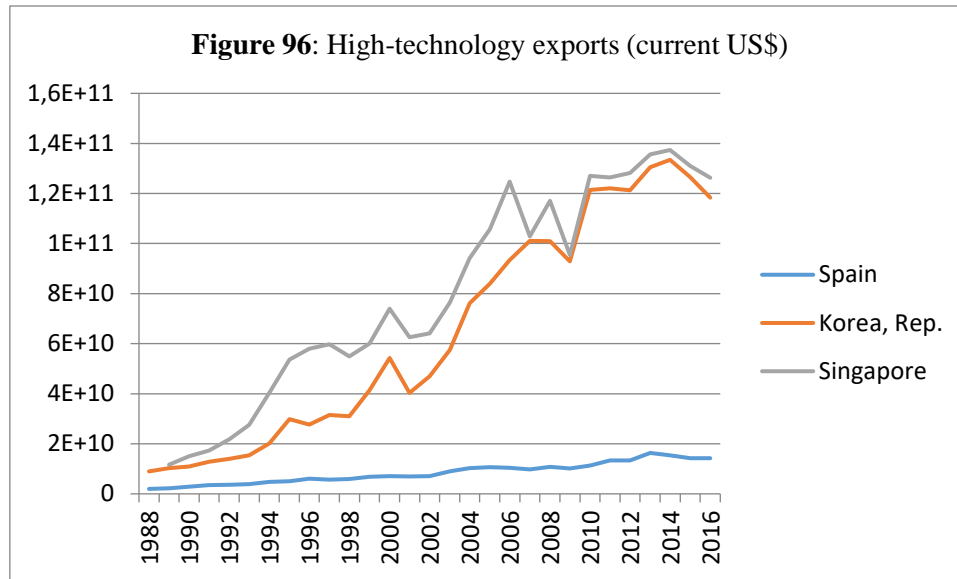
Korea and Singapore are two small countries. Neither in population, nor extension of land, nor in culture nor in history can they possibly be compared with Spain. However, from the point of view of economic development and some economic indicators, they are interesting cases to compare with Spain.

Both Korea and Singapore had a GDP per capita lower than Spain in 1960, although not by very far. This means that both countries started from a situation of "underdevelopment" for different reasons. However, over the decades, the GDP per capita of these three countries evolved differently: Singapore at the end of the 80s exceeded Spain in per capita income and although Korea still remains close to Spain its growth, since the end of the 70 has been more accelerated. That is to say, at the moment in which Spain was in its particular process of "industrial reconversion", Korea put in place the adequate economic policies to develop the country and put it from the technological and industrial point of view, at the head of the world. From this development comes the great growth of income per capita (the so-called "Miracle on the Han River"²¹³). The case of Singapore, even though it is a smaller country, is similar, although in this case Singapore increased very considerably its financial and services industry, focusing on high productivity and very innovative sectors.



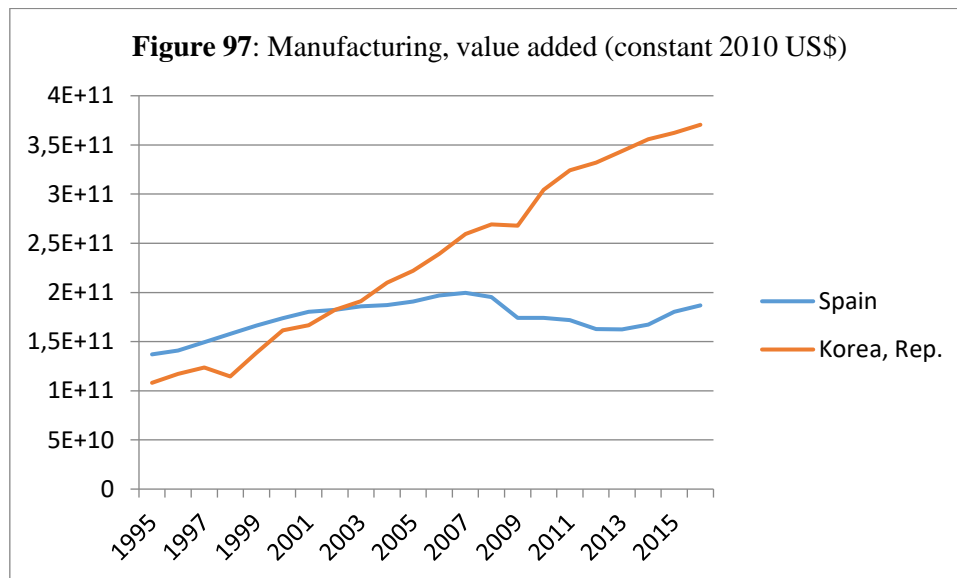
This divergence in per capita income growth also shows a divergence in the technological and industrial development of both nations, which is precisely what leads some to develop more than others and bring more long-term prosperity and sustainability. The following graph shows the enormous divergence in the three countries in high technology exports, a clear sign of technological development, high productivity and external competitiveness, that is, keys to economic success and true sources of growth.

²¹³ See: Miracle on the Han River. *Wikipedia*. https://en.wikipedia.org/wiki/Miracle_on_the_Han_River (Accessed 2018-05-23); and also Kim (1991)

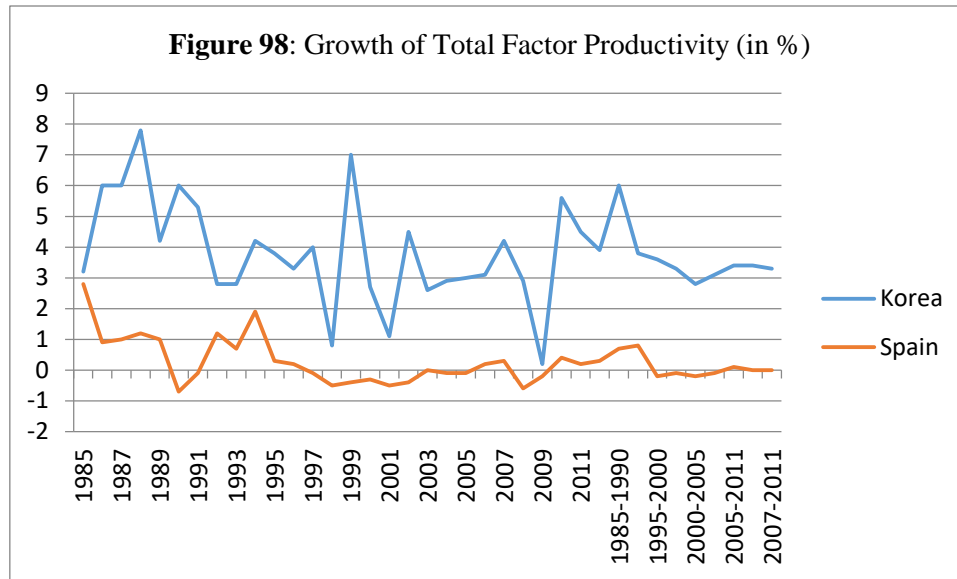


Although both countries started from similar situations at the end of the 80s - only 30 years ago - the increase of Korea and Singapore, compared to Spain is shocking. Spain is totally stagnant, growing somewhat, but very little and very slightly.

Without looking at the development of the manufacturing sector - in this case I will only compare Korea with Spain, since in Singapore the development has been more in finance and financial services - we see a similar trend: Korea in the mid-90s had a sector manufacturing is less important than Spain, without any merit, since then it far exceeds Spain, until reaching a very considerable difference today.



Finally, this process shows very different growth rates in TFP, which is closely linked to the technological and industrial sectors, those with the highest growth in productivity, innovation and R & D. If both countries had a similar growth rate in 1985, Korea maintained higher growth rates than Spain during the entire period.



In the case of Spanish industry, for years and even today, you can find several limitations that for the future should be improved if you want the Spanish economy to be competitive again, connecting with the comparisons that have been made with other economies - like Korea, or Germany in Europe - that have managed to maintain, modernize and better protect their national industries. Some of the limitations we find are:

- The Spanish industrial network is made up of very small industries that by definition have little income and sufficient budget for large investments in disruptive technology, innovations or large R&D departments, and very large industrial mastodons, of an oligarchical nature, with many political links and for the most part coming from the large subsidized public companies of the late Franco regime. These large companies, although they have the greatest capacity for investment and innovation, due to the protection and control - direct or indirect - to which they are subject and for the lack of effective competitiveness in many sectors - such as electricity – they do not have the incentives necessary to invest in innovation and R&D. This means that medium-sized companies, which could be the industrial, technological and innovative engine in Spain, are very scarce.
- In Spain there is also a very limited presence of high technology sectors, something that has only recently improved in some sectors - such as aeronautics and space, pharmacy, etc. - but Spain remains very uncompetitive in electronics or machinery outside from transportation, to give some examples.
- Energy costs in Spain are particularly high²¹⁴ which weighs heavily on the development and competitiveness of many industries, but especially of the metal industry.
- Wage costs and also productivity remain below the European average - for all the reasons that we have explained in these sections -.
- Within the Spanish industrial sector, diversification is scarce. Spain is still very dependent on the construction sector - where it does have some of the largest companies in the world - but also the agri-food and transport and automotive industry - although it does not maintain any own vehicle Production Company.

With this comparison between Korea, Singapore and Spain, what I want to show is that there is no predestination in the outcome of the Spanish economy in 2008 and in the journey through the subsequent desert. That outcome was the result of a series of concrete economic

²¹⁴ And this is due to a very deficient regulation of the system - especially the electric one - which makes Spain have one of the most expensive electricity in Western Europe.

policies, conscious and deliberate, carried out by governments of different types, although with a common objective: to change the Spanish productive and economic system and to bet on low productivity services, tourism and real estate speculation and construction, instead of betting on the technological industry, robotics, competitive and export-oriented sectors and ICT - as will be seen in the following section - This bet ended with the Great Crisis of 2008, after the Great Burst of the Great Bubble, which sank the Spanish GDP, its employment and its economy, and whose total recovery, ten years after the crisis, is still far away, staying the Spanish economy in a situation of critical stability, and weak vis-à-vis other third nations²¹⁵.

3.4.2 The role of ICT: late acceptance, weak development and mild implementation

In relation to the low growth rates of productivity in Spain in recent years and the weak technological development, much has been written²¹⁶ blaming it on the implementation and adoption of Information and Communication Technologies (ICT). In this section I will deal with the subject because it is certainly important to understand why Spain has had such a low productivity growth and why even during the decade of great growth of employment and domestic product, productivity has even decreased.

Information and Communication Technologies (ICT)²¹⁷ are all those resources, tools and programs used to process, manage and share information through various technological supports, such as: computers, mobile phones, televisions, portable audio and video players or game consoles. Currently the role of ICT in society is very important because they offer many services such as: electronic mail, information search, online banking, music and film downloads, electronic commerce, information storage, etc. From a point of view of industrial organization, productive efficiency or competitiveness, a correct adoption of ICT is essential and those countries that have been able to digitalize, automate and robotize have higher levels of efficiency and productivity, while at the same time requiring a human and trained capital and a process of improvement, updating and constant change²¹⁸.

If we look at the evolution of investment in ICT²¹⁹ in different developed countries we see that the evolution of investment in Spain has been almost the same in percentage since 1985. Progress has been almost nil. All other countries have seen a percentage increase in recent years and although since the dotcom crisis in 2001 and after the crisis of 2008 there has been a significant decline, it is perceived a continued increase that is not perceived in Spain.

²¹⁵ “In summary, of the services it can be said, as of the industry, that, in spite of the progress registered, there tends to persist an insufficient development in the field of the potentially more dynamic branches of activity as a consequence, mainly, of the modest technological level of the country and the effects generated by competition-limiting interventions, which, in the case of services, have tended to retreat before the flexibilization policies of the markets introduced with more delay and greater hesitation than in the case of industry”: Rojo, Luis Ángel (2002).

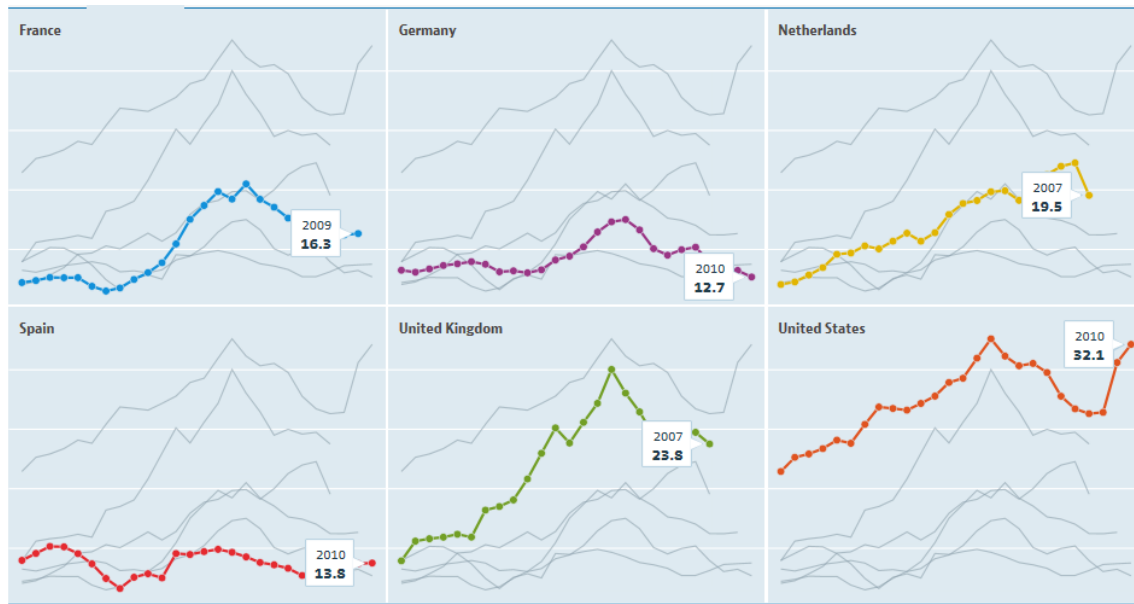
²¹⁶ For example, check Hospido and Moreno-Galbis (2015) and all of the many references quoted in the article from other journal articles dealing with the topic.

²¹⁷ In the OECD indicators for example, ICT has three components: information technology equipment (computers and related hardware); communications equipment; and software.

²¹⁸ “The results confirm the role of ICT as a general purpose technology that needs organizational and business process changes to fully exploit its growth opportunities. The paper also finds out, by applying a non-parametric test, which ICT technologies positively contribute to the generation of convergence clubs in the evolution of labor productivity”: Ceccobelli et al (2012)

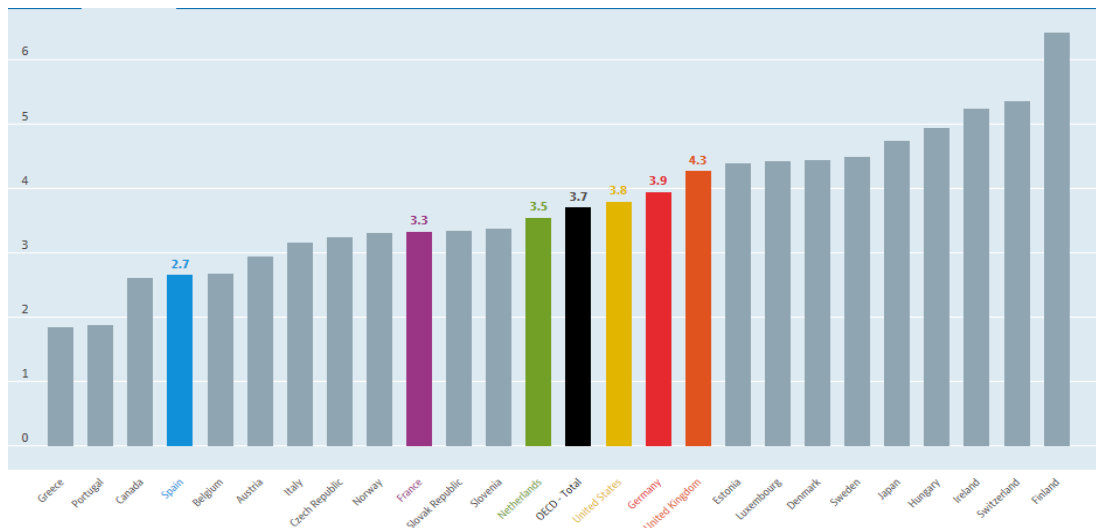
²¹⁹ “ICT investment is defined as the acquisition of equipment and computer software that is used in production for more than one year. ICT has three components: information technology equipment (computers and related hardware); communications equipment; and software. Software includes acquisition of pre-packaged software, customized software and software developed in-house. This indicator is measured as a percentage of total non-residential gross fixed capital formation”, according to the OECD database (see Bibliography)

Figure 99: ICT investment (Total, percentage, 1985 –



If we now look at the percentage of people in the ICT sector over the total business sector²²⁰ we see that Spain is (in 2011 data, which are still very similar) among the last OECD countries, with Canada, Greece and Portugal only worse. This undoubtedly shows a very small importance of this sector on the economy and on employment, which translates into a minor development from the technological and computerized point of view of the Spanish economy that is very closely related to the structure of the industrial network: large number of very small companies with little budget for investment in cutting-edge technology, and large oligarchic mastodons with little incentive for continuous innovation.

Figure 100: ICT employment (% of business sector employment, 1985 – 2011)



From this trend in the adoption and development of ICT in Spain, several conclusions can be drawn:

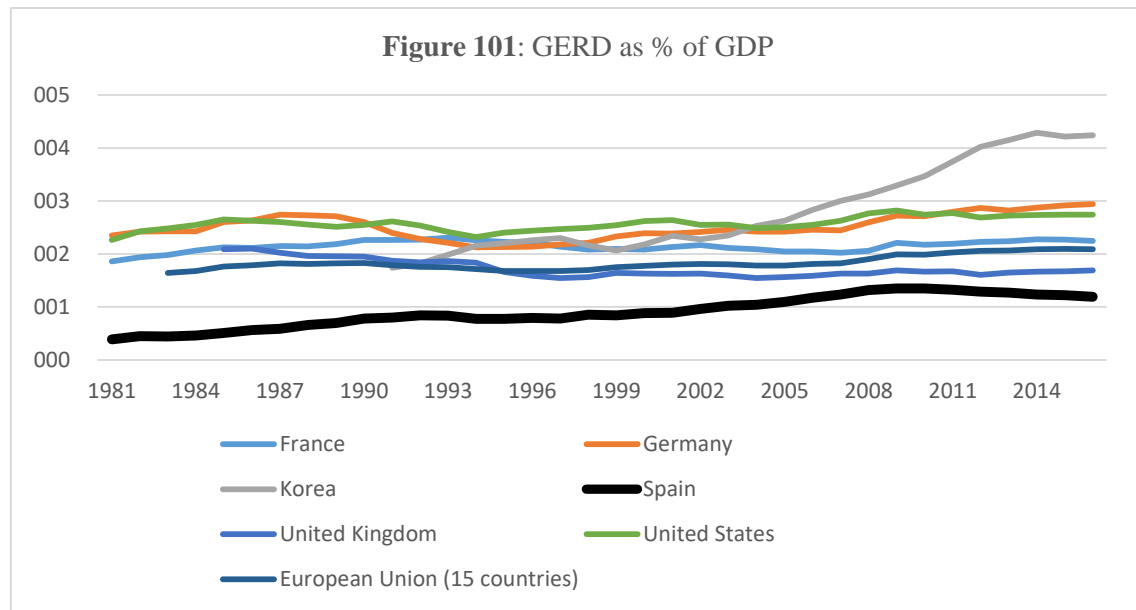
²²⁰ "ICT employment is defined as the people working in the Information and Communication Technology (ICT) sector. This indicator is measured as a percentage of business sector employment.", according to the OECD database (see Bibliography)

- ICT adoption in Spain is closely linked to previous and specific factors from the Spanish economy that have already been mentioned: a productive system that doesn't tend to invest a lot on technological improvement; an economy that was incredibly focused on real estate and housing speculation; an industrial network formed by small companies and very large ones, where the incentives for investment in ICT have been low in both. These factors make the Spanish economy especially vulnerable to ICT investment, with few incentives for investment.
- Small ICT development and investment is a strong cause of the low competitiveness that can be found in many Spanish sectors, in general and relative to foreign countries. It is also a cause of low labour productivity, few innovation and R&D investment rates and low wages.
- ICT investment remains a sector especially weak in Spain and it is key for future development and for a real transition into an economic system based on long term and sustainable growth as well as strong employment growth.

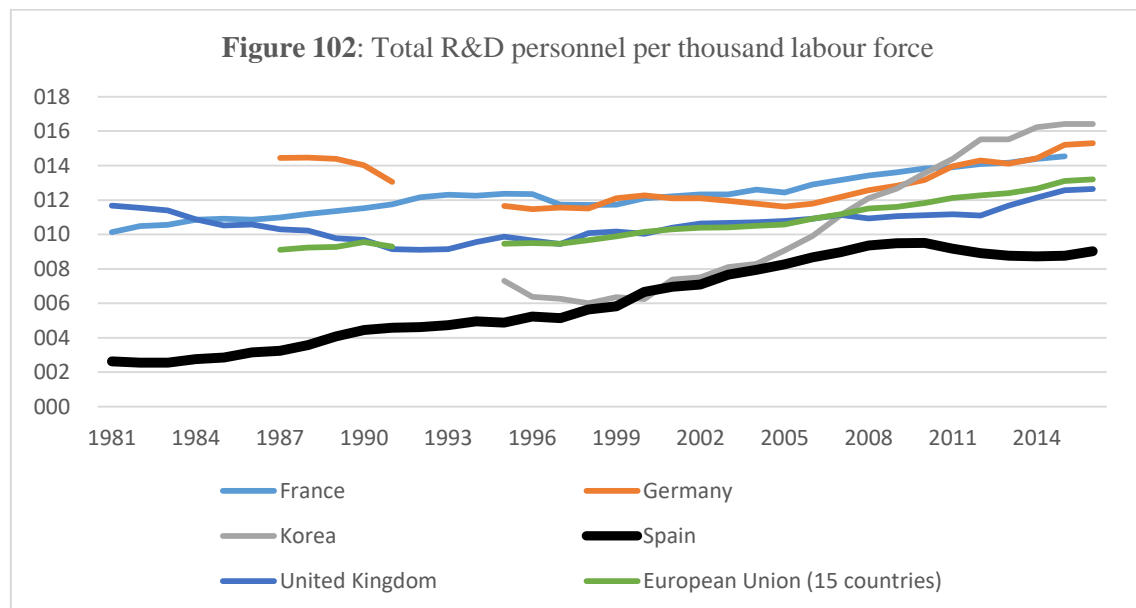
3.4.3 Innovation and R&D: an endemic underdevelopment of the Spanish economy

Regarding innovation and R & D, the position of Spain is also very weak. This is due to reasons very similar to those stated in relation to what has been said regarding the adoption and implementation of ICT, and it also includes, above all, a tendency of the private sector - due to the structure of the Spanish industrial network that I have previously exposed - unfavorable to investment in innovation, technology and R&D or to the financing and support of projects related to the sector. In addition, the Spanish public sector, which is the one with the greatest weight in investing in these elements, is not big enough to actually be able to develop all the existing potential alone.

GERD, or Gross domestic expenditure on R&D, as a percentage of GDP is a very useful indicator regarding innovation and technological change as it takes into consideration research and experimental development (R & D) accounting for creative work on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications. In the following diagram we can see that Spain is, among the nations compared, the one with the weaker percentage of GERD over GDP, thus signaling the weak position that R&D has over total GDP. We also see the enormous development done by Korea, following the comparison we had before.



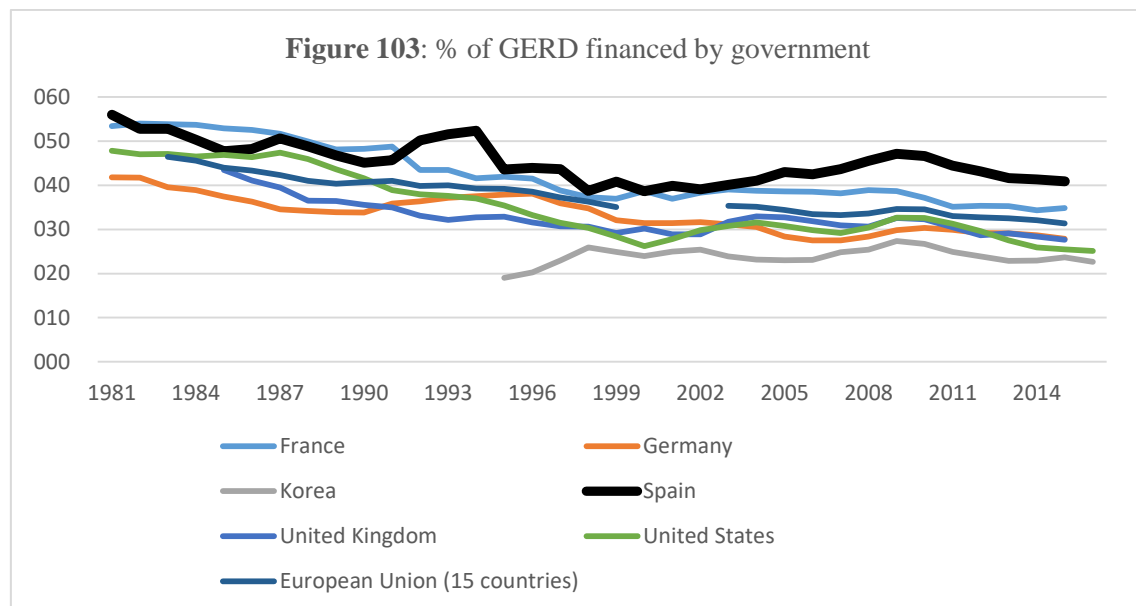
In the following chart we also see the low proportion of employment in Spain in the R&D sector compared to the same group of countries. It is interesting here also to see how Korea and Spain had a similar proportion in the late 90s and early 2000s. However, Korea thereafter grows to take the lead in the developed world while Spain stagnates during the period of real estate speculation and then decreases due to the fragility of the model on which the growth of Spain has been based in the last 30 years at least. The comparison and the general data are disturbing for the Spanish economy.



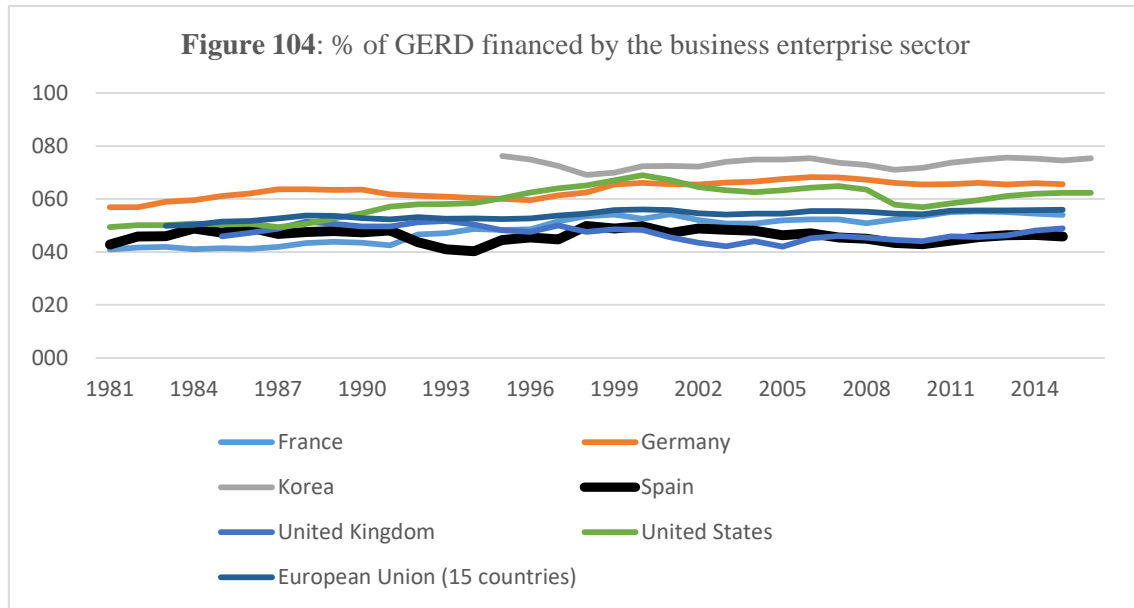
In the following graph we can explain something interesting about the Spanish economy and about investment in R&D. Despite the incredibly low GERD investment values over GDP - considering that Spain's GDP is lower than that of other neighbouring nations such as France, Italy, Germany or the United Kingdom - as well as the low employment values in the sector R&D, it is the government in Spain, and not the private sector, at least in relation to other countries, which has a greater weight on investment in GERD. Although the percentage of GERD financed by the government and the private sector is similar in Spain - around 45% in both cases - in the other countries we see that the private sector is the one that in general finances in a greater percentage the investment in R&D. This indicates that the government in Spain carries an

excessively large weight on investment in R & D - although GERD on GDP is lower than in other countries - and that the main problem is in the private sector, which has a very low weight compared to other countries in the investment in GERD. As we have already said, this may be due to causes that have to do with the structure of the industrial fabric in Spain - with very little leading or technological industry, and with large industries with little incentive for investment because of its archaic and oligarchic structure and the little internal competitiveness - and with its productive model, which as we have already explained, since the mid-1980s has not focused on innovation, R&D, industrial or technological development, and much more on low services productivity, in the tourism sector and finally in construction. Added to this there is an unfavourable environment to undertake, with a large number of bureaucracies, few fiscal and administrative aids, and difficulties in financing venture capital projects.

From the following graph it is also interesting to see how from a peak occurred in 1993, which however was a period of falling GDP and economic weakness coinciding at the same time with a fall in the % invested by the business sector, public investment is greatly reduced until just before the crisis where it seems to start growing again.



In the case of the private sector, there is also a total stagnation of investment in Spain, although it has been trending down since the beginning of 2000, reaching a minimum of almost 40% of GERD financed by the business sector just before of the Great Crisis. It seems that the Great Financial Crisis also had very perverse incentives for the entire economic system that, in times of easy money and speculation, relaxed its investment in innovation, technological progress, capital and R&D.



From this analysis we can draw some important conclusions:

- Spain is one of the developed countries that had less weight of the GERD over GDP. In addition, this trend is a historical constant in Spain since at least the late 70s.
- Although the GERD on GDP has grown since the beginning of the 1980s, it has done so slowly and it is still far from the levels that this factor had over GDP in other developed countries similar to Spain. During the years of real estate euphoria, with great growth in employment and real GDP and when the government and companies had greater financial capacity thanks to the boom, the GERD on GDP actually stagnated and even decreased what shows the perverse influence that the real estate bubble and the easy money and "wealth effect" that it brought had over the Spanish economy.
- The number of employees working in the R&D sector is also the lowest among the developed countries compared to Spain. Although this ratio has grown in recent years, it is still far from other nations. The comparison with Korea is especially clarifying in this case as well: in the late 1990s and early 2000s, both Spain and Korea had similar levels of R&D employees over total employment, however, in Spain this ratio grows but slightly and then falls after the Great Crisis; in Korea increases considerably at the same time which shows a significant change and a fundamental difference in economic policy and preference in terms of economic model.
- Finally, in Spain, GERD funding is driven by the State at higher levels than in the rest of the countries compared, although the State and the private sector have a similar percentage weight. In other countries, the private sector has a much greater importance while in Spain its percentage remains very low, with government funding being necessarily higher than in other countries. These comparative differences can be caused both by the economic distortion that produced the Great Bubble and the economic model that began to consolidate after 1985, as well as by the very structure of the Spanish industrial network, which inherited many of the characteristics of the model that was consolidated during the great expansion of the 60s, where labor, social, political, economic and productive conditions were very different.

3.5 The keys of what has been said and shown in this part

From this third part of the work we can draw some interesting conclusions that help underpin the analysis and conclusions drawn in the second part, as well as better explain the

different trends we observed in the analysis of the Spanish economy from 1960 to the present. This third part consisted of explaining the great problems of the Spanish economy, those problems that give meaning to many of the observations, anomalies or characteristic aspects in the economic development of Spain in the last decades.

- The Great Real Estate Bubble as the *primum movens* of the distortions in the Spanish economy: as we have seen in the first sections of this part throughout the analysis in the Genealogy of the Great Real Estate and Housing Bubble, the creation, development, consolidation, boom and bust of the Great Bubble has been the great disturbing cause of economic activity in Spain since 1985, when the foundations are laid for its future consolidation. The disturbances that begin with the Great Bubble are the last cause of the development of employment in the Spanish economy, of the waves of expansion, of the low growth of productivity despite a high growth of employment and GDP during the late 1990s. and the beginning of the 2000s, and of the deep and still not overcome sequels, as well as of the weak recovery of the economy, since the outbreak of the Great Bubble and the coming Great Crisis.

The immensity of real estate speculation, the dependence of the Spanish economy on it, the adhesion of a large part of the population to the speculative game, the magnitude of the development of the sector, the influence and close relationship of the private and public sector, of the administration and the savings banks, and the endemic weakness of the Spanish industrial and productive network, show the enormity of the Bubble, its influence and destructive capacity and the immense irresponsibility that was laying the foundations for its creation, consolidating it over time it and, finally, promoting it and not stopping it when the Great Crisis was foreseen. Even more than this, worrying remains that fact that the government has not yet made all the major reforms necessary so that something like this does not happen again.

- The Spending of the Bureaucratic State: public spending, pensions and autonomies: One of the consequences of the real estate bubble was to distort GDP, employment, economic indicators and, above all, tax revenues. The increase of these due to the disproportionate growth as a result of the increase in production during the boom of the bubble meant that, after a period of reduction of debt and expenditure to meet the requirements that allowed the entry into the euro, it followed a period where these variables started increasing again in absolute values – even if they were decreasing relative to the GDP of that time, inflated and artificial due to the distortion of the real estate sector -.

The increase in spending, disproportionate for a time of expansion when the correct thing would have been to save in order to have something in case of a future crisis - a countercyclical policy -, ended up peaking after the Great Crisis and, at the already high levels of spending, different items were added to it that still increased it more (interest on the debt, stimulus plans, bank rescue, etc.).

The other big problem was and still is pensions. They are the large part of the investment in public expenditure in Spain and given the conditions of birth and population, as well as the prospects for economic growth and employment in Spain and the production structure and organization of the system as it is, it is extremely difficult to sustain a spending system like this in the medium and long term.

Finally, the autonomies are the great hole for the State and a black hole for public finances. They have been part of the synthesis of the real estate bubble, they are at the centre of excessive spending in projects that are rarely useful, and the future dynamics that are already perceived is that expenses will keep growing without pause in the years to come.

- Corruption as the ultimate synthesis of the political and economic system: corruption in Spain has been a hidden scourge for many years that after the artificial fall of the facade

of prosperity created by the Great Housing bubble has emerged as a systemic problem. Although of a political nature, corruption in Spain has also been intimately linked to the development of the economic model in recent decades, with a system that brought together Spanish politicians, savings banks – *cajas* – and tenders for construction works. This corruption is therefore explained first of all by the internal characteristics of the Spanish system - of an oligarchic nature and without political representation - and then by the development that this same political system imposed on the economy.

- About the “labour productivity puzzle” there have been three main issues to take into consideration:
 - A dual labor system: this system, which was created with the labor reform of 1984 and further consolidated with the 1994 reform, reforms that at the beginning tried to just liberalize the system, maintained the benefits of one set of workers – those with permanent contracts – while under protecting another set – temporary contracts –, made the system unequal, inefficient and not very liberalized in order to adjust to the different wings in the economic situation. Spain has been one of the countries where employment has been more affected by variations in production, especially after the Great Crisis of 2008. Also, regarding labor productivity, it has been low due to lack of incentives in the over protected part of the permanent employed population and also low due to lack of incentives in the under protected part - the temporary contracts - because this part of the employee population has tended to be employed in low productivity, low salary and low protected sectors.
 - The boom of temporary contracts: after 1984 but especially through the late nineties and during the times of the biggest expansion of the Great Bubble, Spain created a lot of employment, but the majority of it was temporary. These contracts usually were taken by people with low qualifications, young people with little experience, and immigrants, who were employed especially in the service sector, in parts related to the tourism sector and in construction. These sectors, which were the ones that really made employment grow, were sectors with low productivity and little incentive towards technological improvement and innovation. At the beginning of the crisis and being these sectors most affected by it, we were able to see how productivity increased by a mixture of "economic selection", where the most productive maintained their positions, and the fear of losing the job that made many workers have to work more to not lose their jobs. In the most recent years, with employment recovering, the same tendency of increase of temporary employment and fall of labor productivity is perceived again.
 - The massive influx of immigrants: this has been one of the most important factors of social and economic change in Spain in the last decades and economically it is closely related to the previous point. Many of these immigrants who arrived to Spain during the period of maximum expansion of the bubble were in most cases called to work in low productivity positions, with temporary contracts and in positions according to their basic educational level. After the crisis, many of them were affected and a large majority decided to leave Spain. As they were mostly employed in sectors of low productivity, when all those jobs were lost, productivity increased - also due to a logical effect of a massive fall in employment, stronger than the fall also important in production - at the beginning of the crisis to later stabilize and show a trend again towards decay.
- Historical stagnation and low rates of growth of TFP, innovation and R & D: Spain has had historically very low TFP growth rates since the late 1960s and above all since the transformation of the political regime around 1975. These productivity rates are closely

related to the mediocre indicators of the Spanish economy and the production model that began to consolidate after the mid-80s. The cause of this growth compared to other countries is mainly due to the following causes:

- The process of changing the economic model: from the mid-1980s and for different reasons that have been explained in depth in the respective section, Spain undertook a process of "industrial reconversion" that led it to, instead of modernizing, protect and invest in the national industry to make it competitive, productive and export-oriented, Spain opted for the change of economic model: an new economy based on services, especially related to tourism, and a construction and real estate sector that was the sole source of wealth creation - rather "wealth effect" – vanishing everything after the Great Crisis that followed. This lack of investment in technology, innovation, development, industrial capacity, robotics, automatic systems, etc., made Spain a country that while the easy and cheap money, the European aid and the income from the bubble and the tourism lasted there was no problem but when all of this finished, the real and strong weakness of the Spanish economy surfaced.
- The role of ICT: ICT, which are essential for economic and productive development, have traditionally not been much implemented and developed in Spain, largely again due to the historical structure of the Spanish industrial network that was inherited from the dictatorship and that it has not been in the specifically problematic points successfully reformed and also to the few public and private incentives for its development, implementation and improvement.
- Innovation and R&D: as with Innovation and R&D – very closely related with ICT technologies –, Spanish companies have not invested much, comparatively with other countries, in innovation and R&D, while the government, which invests more than in other countries, does not have sufficient financial capacity to actually create a true national plan for its successful development. These problems are some of the reason that help explain why productivity has remained at such low levels.

The facts presented here form the great nucleus that helps explain many of the anomalies of the economy and Spanish. This analysis and description is especially important first of all to try to understand what has happened, and then to try to find solutions and improvements that are appropriate for the concrete problems that the Spanish economy really suffers from, and above all so as not to commit again the same mistakes of the past. In the next section, which will be where this work will end, the main guidelines for the objective improvement of the Spanish economy in the medium and long term will be drawn up. Measures that are essential to put Spain again in a strong economic and financial position at the same that the long-term sustainability of its State and economy are enforced. Thus, an economic improvement is not only necessary from a purely economic point of view, but it is rather closely linked with the political, social, cultural and moral regeneration of the Spanish society, being these topics sources for new thesis²²¹.

²²¹ With regards to political regeneration, what Spain really needs is a total "rupture" with the current political regime, of oligarchic character, without representation and with non-existent separation of powers. Spain needs to be a true formal democracy, that's to say: a country where Nation and State are truly separated, where the Nation elects in separate elections its representatives and its president, and where the powers – legislative, executive and judicial – are truly separated. This topic would be the source for another long thesis on the transformation of the Spanish political regime.

4 CONCLUSIONS: THE REFORM. OF HOW ONLY THE BURIAL OF THE “FARCE MODEL”²²² AND THE STRUCTURAL TRANSITION TO A NEW ONE IS THE ONLY SOLUTION TO PUT THE SPANISH ECONOMY AND NATION BACK ON TRACK

In this last part, that I'll try to make brief and concise²²³, I will simply show the main master lines of economic change that Spain needs, based on the trends and evolution that we have seen in the Spanish economy since the 60s to the present and the severe problems it has faced and it is facing.

In the two previous parts we have seen both the evolution and characteristics of economic growth in Spain as well as the most important problems that help to understand and explain that development. To be able to improve many of these issues, consolidate sustainable economic growth in the long term, put Spain back at the head of the developed countries, increase productivity, exports and therefore competitiveness in the international market and, incidentally, strengthen the Nation against its enemies - economic or not, internal or external - it is necessary to carry out a series of measures or structural changes, that without being totally exhaustive, they do include a large part of the problems and solutions facing Spain.

4.1 The Income Approach²²⁴: The structural transition to a new model of income distribution where Labour and Business are extolled, and unproductive income is repressed (especially construction/housing-related ones):

The Great Real Estate Bubble and in general the entire Administrative and Welfare system, as well as the productive model, which has developed over the years, have fundamentally distorted the distribution of income in Spain - as we have already explained at length -. Spain is therefore in a situation in which it has to carry out a Structural Transition towards a new economic, social and political model, which allows the sustainability of the Nation and the State in the long term and appease the sources of discord and centrifugal forces that are still opposed²²⁵.

²²² A model that, without being excessively catastrophic, leads to despair, unfair, extractive and interventionist, here and not only: □ Robb, Greg. Why American capitalism doesn't work for all Americans, says Nobel winner Angus Deaton. *Market Watch*. Dec 14, 2017 4:47 a.m. ET <https://www.marketwatch.com/story/nobel-prize-winning-economist-angus-deaton-model-of-american-capitalism-that-lifted-working-class-seems-to-be-broken-2017-12-13?mg=prod/accounts-mw> (Accessed 2018-05-23).

²²³ The different measures to be implemented, which I will only present here, would require work at least as extensive as this one. For this reason, and not to lengthen the document, I will simply present here the main lines of the Economic Reform.

²²⁴ In this section, the analysis I'm carrying out is mostly based on the contributions and insights of the Internet user, "Pisitófilos Creditófagos", authority on the issue of the Great Real Estate Bubble: Transición Estructural. Entries about Internet user "pisitofilos creditofagos". Internet Forum. <https://www.transicionestructural.net/index.php?topic=1213.2280> (Accessed 2018-05-23) I think it is essential to translate the essentials of his ideas into English – with some of mine –, in order to expand the audience. Of course, I do not arrogate to myself the authority of these ideas.

²²⁵ "This structural change is made even more necessary under the current Spanish economic situation, which is a Total Financial Strangulation - as the same Internet user has called it -:

- Financial strangulation = no income with which to honor an increase in indebtedness
- Total = is of the three agents: families, companies and State
- Final = the last conjectural cycle of all those that includes the structural cycle

Under this totally critical situation is Spain still today, ten years after the crisis. We must also take into account that the conjectural cycles do not mean the same thing at the beginning as at the end of the structural cycle, that is why this crisis for Spain is the end of a structural cycle as much as it is of a conjectural cycle": Transición Estructural. Entries

Starting from the 70s - the decade of the 60 was an exceptional decade of growth in all respects, both in Spain and in the world -, Spain enters a period of stagnation that comes with the creation of this perverse model - a mix of many factors - which will eventually consolidate throughout the 1990s and reach its climax in the first decade of the 2000s. However, despite a real and objective growth in living standards, the progress that should and could have been done was not done. The weakness of the Spanish model has been very clearly perceived since 2008 with the weakness of the recovery, the huge fall in GDP, low productivity values, the weak industrial and technological network and the few inventive innovations, R&D and entrepreneurship.

Therefore, the Structural Transition can be defined as the historical process by which the classical capitalist system - a system based on merit, development, innovation, entrepreneurship and sustainable growth, as well as the maintenance and strengthening of the Nation, serving as a base for a State and Administration, which should always serves the Nation, and not otherwise - gets rid of the model created from 1980 and onwards, based on services of low productivity, tourism and real estate speculation, and restores a true Welfare State - smaller, but more effective -, already free of inflation and of expenses, structures and superfluous and unsustainable entities. For this, it becomes essential first of all a repression of unproductive housing rents, pensions and armoured and excessive salaries. This new model that was implemented in the mid-80s in many countries but especially harmful have been their effects over Spain, sought to replace the Welfare State, overcoming it, creating a "Wealth Effect" that could incorporate the entire population, without the need to innovate, work or create real and sustainable wealth. All this illusion collapsed in 2008, when all the difficulties and errors were finally perceived.

4.1.1 The “Bison metaphor” to introduce the Income Distribution Approach:

In the Neolithic,

- Only a few of us go out to hunt a bison (Production-Supply).
- In the cave, we cut it out and we share it among all, whether or not we went hunting (Rent)
- Finally, each one consumes his piece or saves it (Spending-Demand).
- We can divide twice as much by borrowing a second hunted bison from the cave next door (External Debt); but in the next hunting expedition we will need to hunt three bisons: the two that we are distributing and the one that we have to return.

This metaphor, although it is a simile with all its limitations, is useful for current economies. At present, we have, roughly, three economic agents, vulgarly: Families, Companies and the State, that's to say:

- Households and Non-Profit Institutions at the Service of Households;
- Non-financial corporations and quasi-corporations, as well as Financial Institutions;
- Public administrations.

The recipients of the Rent (bison) are the natural persons, although we obtain the income (fillets of the bison) through our communities of goods and legal entities, private or public.

The distribution of these "bison fillets" is the key to the vault of the social, political and economic sustainability of the system, as well as a matter of national morality how well these rents are, first, collected and, then, distributed.

4.1.2 The income typology: primary canonical income. Productive and aproductive rents

The economy is basically (1) Production (Supply), (2) Income and (3) Expenditure (Demand). As there are, in short, only two factors of Production - Labour and Capital, being Capital everything that is not Labour²²⁶ –, there are only two large groups of primary income: Labor and Capital. But looking closely it is observed that, nested in them, there are rents that are not directly related to Production.

It is very widespread that - cfr. Economic Theory, National Accounting, Financial Accounting, Commercial Law, Labor Law, Tax Law, etc. -:

- The rents (minuscule and plural) that implement the transformation of Production (GDP) into Rent (capital and singular), whatever their nature, we can only classify them from an accounting point of view as either from Labor, or from Capital, or as mixture from Labour and Capital; and,
- Labour has its "Remuneration", but to Capital only corresponds a "Surplus", that is to say, rents from Capital have a residual character with respect to those of Labour - Labor rents would be more "primary" than the other primary rents, those of Capital -.

This Labour/Capital dichotomy in the Income Approach, which has been practically intact since the 19th century, is too simple after the change in the economic model that has occurred since the 1980s. The traditional and old dichotomy does not help explain the current crisis nor does it help to overcome it, rather the opposite.

Here, what I expose - based on the proposal of a group of Internet users who are authority on the subject²²⁷ - it is a modernization of the Income Approach: we must net the two canonical primary rents – Labour and Capital –, isolating the rents nested in them that are not, directly, neither consequence nor cause of Production. That's to say, those which have no direct relationship with Production; namely: unproductive rents, or rather, being more correct: "aproductive" rents.

Product is transformed into five types of Rent, in chronological order of extraction, in what could be described as "communicating vessels" since all types of rent are communicated between them:

- a) Productive Rent (1/2):
 - from Labour (1/3)
 - from Business (1/6)
- b) Aproductive Rent (1/2):
 - from Housing and Real Estate (1/6)
 - from Pensions (1/6)

²²⁶ Business Initiative and Land (Natural Resources) are not considered factors of production

²²⁷ Again, from: Transición Estructural. Entries about Internet user "pisitófilos creditófagos". Internet Forum. <https://www.transicionestructural.net/index.php?topic=1213.2280> (Accessed 2018-05-23)

- Fixed-financial²²⁸ (1/6)

Finally, the entire Rent is transformed into Spending, either Consumption or Savings - to be indebted is to bring your future Rent with the collaboration of the Savings of another-.

Today, we are interested only in four large classes of aproductive Rent nested in the two canonical and primary ones, which make up what is called the “Private Tax System” (*Sistema Tributario Privado*), which is levied with the help of the State:

- Housing and Real Estate²²⁹,

- Pensions,

- Fixed-Financial, and

[- supersalaries²³⁰]

We do not say that these four types of rent have to be abolished, but rather that their size must be managed and reduced because the distribution of the Rent is a system of communicating vessels, and what goes to aproductive destinations, stops going to productive ones - Labour & Business -. Going one step forward and in order to understand this, if all the Rent is given to landlords, pensioners, people with savings in the fixed-interest financial sector – mainly deposits – and supersalaries, then nobody would work or undertake any innovative project, so we would have negligible levels of Production as people would have no incentives to produce productive rents when aproductive rents are higher and taking all of the benefit. This was precisely what happened in Spain during the Housing Bubble, where housing and real estate rents were disproportionate, forcing many to direct their investments and attention to that sector as it was not as profitable or interesting investing in other sectors. Here it is thus the very disturbing essence – economically speaking – of this massive speculative process for the entire economy and productive system.

Labor and Business, and "Capital", rents are those that should have a bigger importance, while detecting and isolating four types of income nested in them that have no direct relationship with the Production. Summarizing what has been said, the Spanish productive and economic model has undermined for decades the accumulation of Business rent, that is to say, the true Capital, giving a higher importance to those rents coming from sheer speculation than from Business development.

To see this “Income Approach” more clearly, if we imagine a worker now we will see that the rent he received from his Labour is little – decreasing real wages over time –; yet, with this rent he has to face several expenses: housing mortgage (housing and real estate rent) and taxes (to pay for pension rents). The bigger these last two rents are, the poorer the worker will be. If we take the perspective of a business man or an owner of a company, the process is the same, the higher housing and real estate rents (for example paying for the rent of a warehouse) and

²²⁸ Since after the intervention of the Central Banks the financial-fixed have already been repressed thanks to the low interest rates.

²²⁹ The troubling issue regarding these rents is that, with the Great Bubble and even later through the possible rent bubble, real estate incomes have to be discounted from wage incomes, making the workers poorer, as well as the entrepreneurs who are the who finally pay wages: Gross Salary - Social Security - Treasury - Rent (pure or discounted - mortgage -) = Negative net salary. Hiring a worker is having to face, in a certain way, his enormous housing rent. This explains very well the great social tensions that this system produced when it went bust. This rent to be smaller in quantity but higher qualitatively, may not be taken into account. It comes from the productive part of the income from Labor, which effectively gives rise to the 'Supersalaries', which are also an economic distortion, and often illogically entrepreneurial.

²³⁰ This rent is certainly small in quantity but high qualitatively, thus it may not be taken into account. It comes from the aproductive part of the rent from Labor, which effectively gives rise to the 'Supersalaries', which are also an economic distortion, often illogically.

social security taxes (to pay for pensions) the lower the benefit obtained from Business rents, that are the really productive ones. This logic is the essence of the social repression process in a speculative system where business and wage rents grow less than housing and real estate, pensions – notice that we don't say these rents should be repressed, but rather moderated, especially in its highest sections – and fixed-financial rents²³¹.

Therefore, it is worth having in mind that Rent only has one real source: Labour organized as Business. To be indebted is to bring Rent from the future; is to bring to the present Labour & Business from the future. This has been the big problem in Spain: very high debt levels mean an obstacle for the future development of Spain, as resources from the future are being brought to the present in order to pay for the expenses of today, weakening the savings from the future.

Therefore, the new Income Distribution system must strive to repress these aproductive rents, especially from now on the housing and real estate one first and foremost to avoid suffering a distorting crisis like the previous one. In turn, a defence must be made of the productive income that is what truly creates wealth and makes the "system" sustainable.

4.1.3 The role of housing in the new system: humiliation, death and final burial of the old model

After the explosion of the Great Real Estate Bubble and the Great Crisis, the construction and real estate sector in Spain sank. This fact makes a new housing model necessary to overcome the dead model that would never have to be resurrected again.

From now on, housing should be only a durable basic consumption good and subject to the sovereignty of the Nation, as it has been the whole history of humanity until it became a speculative and investment good that led to the Great Crisis. Housing materializes savings worse than money, which (a) makes it a safe investment; and (b) it is not profitable; and (c) it is not liquid. In addition, the price of housing is the most important of the 'political prices' -political prices are fixed by the Political Power for a particular good or service, generally basic, whatever the Market Price, that is, the result of supply and demand, between individuals or independent entities and under conditions of free competition -. As it happens with Health and Education, the more expensive Housing results to users, the less income available for Labour and Business - and with this we connect with the Income Approach before described -; under the speculative process in Spain, an expensive housing sector resulted in a much worse combination of Consumption-Investment and, in second round, in much worse Production.

As it was already known in theory, although now demonstrated in the practice of the Spanish speculative process: rising housing prices supposes, first, a "wealth effect" and, second, ruin and poverty when that false and artificial "wealth effect" disappears. At the same time, from an economic point of view, real estate speculation creates a distorting force to attract other companies that at first should not have been corrupted by this trend. It is for all these reasons that housing must become the durable basic consumption good subject to the sovereignty of the Nation that should never have ceased to be²³².

²³¹ In addition, we must take into account another distorting fact of the Big Bubble: real estate is not a financial assets. They are real assets. We speak of 'financialization' of real estate to refer to the deformation created by having considered them financial assets. The only data that matters is the price of basic housing for the level of individual disposable income that it implies.

²³² There are other measures that could be implemented so as not to give rise again to a speculative bubble like the one Spain experienced: "(a) drastic increment of direct taxation on real estate. Being the main element of cost of the municipalities, that after several rises the IBI represents hardly 1% of the GDP is anomalous - in France comparable taxes add almost 3% -; (b) Penalization of closed houses following the models of many European countries, where

4.2 The much-needed labour market reform²³³:

Based on the study that we have carried out in this work it can be seen that Spain has a serious problem with its Dual Labor System. It must be considered that together with Greece, Spain was the European country with the highest unemployment increase during the Great Crisis, despite a fall in GDP similar to that in other economies, which shows the special sensitivity of Spanish employment to variations in GDP. In addition, as we have seen, Spain has had a very high structural unemployment since the end of the 70s and until the massive influx of immigrants and the Great Real Estate and Housing bubble, the levels of active population and labor force were relatively low, such as employment.

There are several studies that suggest that job destruction between 2008 and 2013 was due, among other things, to rigidities in the labor market, with an adjustment in employment instead of in wages and hours per worker²³⁴. Just after the crisis, as the limitations of the Spanish labor system were already known but little was done to fix it, important reforms were carried out in 2010 and, particularly, in 2012, which were at that time essential after the Great Crisis. However, as has been shown they have not been enough to solve all the structural problems of the labor market

More concretely, among the structural problems of the Spanish labor system we can mention²³⁵: (1) High structural unemployment rate (15.5% on average); (2) Very volatile cyclical unemployment ($\pm 8pp$); (3) Very volatile entry and exit flows; (4) High long-term unemployment rate ($> 12pp$); (5) Adjustment via jobs rather than wages (as opposed to, for example, Ireland); (6) No adjustment through hours worked per employee (as opposed to, for example, Germany); (7) Excessively high rate of temporary employment and inequality; (8) Low rate of part-time employment, with a negative correlation with U; (9) High rate of youth unemployment, which doubles the aggregate unemployment rate; (10) Uneven regional unemployment (some Autonomic Communities have much higher unemployment rates than others).

The fact of having a dual, inefficient and very small inclusive labor system has important causes for employment and the economy in Spain. First of all, we find inefficient collective bargaining (wages and firm productivity) and rigidities that in turn leads to a rigid wage structure and indexation to inflation. This Dual System is not only unfair in many places but also creates legal uncertainty. Spain also has a tax structure which is unfavorable to employment, which is also behind the high levels of unemployment. To this we have to add a mismatch between vacancies and skills: inadequate and/or inefficient active labor market policies and generous passive policies inefficiently integrated with active labor market policies. Finally, a strong fact that affects the Labor System are undoubtedly the other inefficiencies (regulations, product market competition, firm size, institutions, etc.) in the economy that arise from the change of model that we have described previously.

there are from public real estate portals to strict surveillance of homes without declared residents to force them to damage the market. Always through objective mechanisms linked to the market and not using expropriatory "agencies" or similar. (c) Streamlining eviction procedures in the event of non-payment combined with better incentives to lease in the form of different types of contracts, adding the possibility of some very long term that can contemplate things such as very low prices in exchange for moving costs of maintenance. (d) Construction of a huge public residential park that helps bring down housing prices [...] (e) etc". From Álvarez (2016).

²³³ I am basing my analysis on the analysis I have carried out in this work and, especially, on the following BBVA bank study on the Spanish labor market and other similar studies on the Spanish labor market: Doménech (2017)

²³⁴ See Doménech (2017).

²³⁵ From Doménech (2017).

In 2012, a major reform of the labor market was carried out²³⁶, however, more measures are necessary. What we propose here are four main master lines that any Labour Reform should keep in mind:

- (1) More flexibility in the Labor Market²³⁷
- (2) Ending the dual hiring system: efficient, equitable and inclusive labor market.
- (3) A more effective and less intrusive role of the Administration in the labor market: fewer archaic regulations, taxes and impediments on employment.
- (4) Improve collective agreements and negotiations.

As this section is not an exhaustive work on the labor market, I am simply exposing some master lines that should be further developed - its consequences and its way of implementing it - in future works.

4.3 The case for an Industrial, Technological and Energetic Transition: the need for a coherent and long-term industrial and technological policy for the entire Nation

Spain undoubtedly needs a National Industrial, Technological and Energy Plan (NInTeEnP), strategical, which entails long term investments and a long term vision, and which underpins a new economic model change. In the same way that after the 80s Spain opted for an economic model based on tourism, services, construction and real estate speculation, now that we have seen the problem brought by all this, it is necessary for Spain to turn towards a system based on innovation, state-of-the-art technology, national and competitive industry, investment in R&D and ICT technologies and the creation of quality employment. The State, as has always been the case, is the only one with the sufficient financial capacity to be able to lay the foundations of an industrial development similar to that which occurred after the Stabilization Plan in 1959 - but updated to current needs and the challenges of the moment - , or to, at least, let the Nation thrive giving the incentives for such development.

The plan should have three master guidelines:

- (1) Industrial Plan: direct investment in leading industrial companies and new sectors that may appear in which Spain could have an objectively powerful position and a competitive advantage; set easy regulations and methods to increase national competition, entrepreneurship and development of newly-created and smaller companies into much bigger ones.
- (2) Technological Plan: increase innovation and development with the creation of the bases for the development of leading companies in the sector. Focus on the new leading sectors: artificial intelligence, robotics, defence, ICT, etc.
- (3) Energy Plan: reconvert the system to make Spain more independent in energy matters.

²³⁶ “The 2012 labour market reform: Decentralisation and modernisation of collective bargaining: priority of agreements at the firm level; Elimination of the indefinite extension of collective bargaining agreements; Collective bargaining agreement opting-out; Internal flexibility mechanisms: substantial amendments of wages and hours per worker are possible due to economic, technical, organisational or production-related reasons; Functional mobility among occupational groups; A significant reduction in the cost of dismissals and simplification of economic reasons for fair dismissals” Doménech (2017)

²³⁷ “Benefits of greater flexibilization: Reduction of labour costs, facilitating the adjustment of the labour market and breaking the vicious cycle of increasing real wages and job destruction from 2009 to 2011 (Spain vs USA or Ireland); Lower separation rate after 2Q2012 despite the more intense financial crisis (increase of risk premia and banking restructuring) and the fiscal consolidation; Positive surprise in employment expectations: the recovery of employment started earlier than anticipated in the consensus forecasts; A shift of the Beveridge curve towards the origin since 4Q2013; Job creation with a low inflation and GDP growth deflator, or negative ULC differentials with EMU; For the first time in the past few decades, from the second half of 2013 onwards jobs have been created with a surplus in the current account”: Doménech (2017).

- a. Discuss the viability of nuclear energy as a source of energy, especially in a country like Spain that is heavily dependent on third nations for energy.
- b. Study the viability of fracking.
- c. Regarding renewable energies, see in which sectors Spain can flourish and have competitive capacity, but without reaching the ruin of the State in the financing of impossible projects.

Basically the idea is to bury the dead model before it's too late and start laying the groundwork for a new model. I am not saying that the Spanish State, like the Soviet State, should create Quinquennial Industrial Plans - although it could certainly do so too - but simply that it creates incentives – from a labor, business, budgetary, financial, etc., perspective - for the economy itself to turn to these different sectors. Instead of promoting low-productivity sectors, cheap tourism and speculative Housing Bubbles, the State could, first, repress these and other unproductive and damaging sector and, second, incentivize those sectors that do create long and sustainable growth.

In relation to the services sector, Spain must also try to move towards sectors with higher added value - for example by promoting financial services - and providing facilities for their development, always with the correct and strict regulation.

Agriculture has to remain an important export source in Spain, maintaining quality while modernizing. Spain is an incredibly rich country in agriculture, and has an exquisite culinary culture, that's why there's always going to be wealth creation in this sector.

This part is also especially related to the reconversion of the Administrative State that we will deal with very briefly in the following section. Any Economic Reform in Spain has to go in hand with a deep and long-lasting reform of the State and the Administration.

4.4 The Great Reform of the State²³⁸: end of the (too expensive) autonomic model, recentralization, administrative and institutional efficiency and an economic policy of long-term sustainability (tax system and public pensions)

Every great economic reform in Spain must be accompanied by a restructuring of the State and the Administration²³⁹. Spain certainly needs a simplification of functions due to the duality of many of them due to the territorial structuring and the lack of control over it. What it is defended here is not that Spain should diminish the State – although it certainly should, in a moment of weakness as the current one is not the time to raise this question -, but that it should recentralize function to increase the Spanish Central State at the expense of diminishing until eliminating any regional, parallel and extractive state. Functions such as Education, Health, the Treasury, the different organs of government and the different institutions of the State must be unique and common to the entire Nation; equality begins when everyone, as citizens of the same country, has the same rights in any part of the country.

This Administrative simplification, which is basically a centralization, must touch all the functions of the State. As we have seen above, the number of civil servants in Spain has grown disproportionately and a great majority of them are regional or local officials, and not always officials of the Central State. In relation to public spending we have seen the increase in total terms since at least the 1980s, with a spectacular increase in public debt since the Great Crisis of

²³⁸ Obviously, this Reform should be at the same time accompanied by a political rupture with the current and deficient political regimen. The objective: formal democracy; that's to say: a representative system with true separation of powers. Everything to know about this topic can be found in García-Trevijano (2016).

²³⁹ And also of a break with the current political system. Spain needs a truly representative system with separation of powers. Only this will be able to morally regenerate the Nation.

2008. Spain cannot afford to have a public system that is not only a brake for the economy - for example, in relation to taxes and bureaucratic regulation – but that it also means that the sustainability of the State itself in the long term is not guaranteed and it is not sustainable (for this reason, I have called before the State, a “Minotaur State”). The economic, legal and political weakness in Spain is allowing the centrifugal, disintegrating forces of the Nation to prosper and this is something that must end.

Another important point to take into account in this Great Reform is the role of the Welfare State in Spain. Although Spain certainly does not have a Welfare State of the enormous level of that of France or Germany, it is also true that these two nations have a social-economic structure different from Spain, and they also have more years than Spain with an established welfare system. Spain needs a welfare state that supports the poorest and needy; Spain does not need a welfare state that supplies functions that citizens themselves should be able to do²⁴⁰, or that it helps the extractive companies and rent-seekers, or that it helps the enemies of the Nation. The Welfare State is a privilege and as such the population should perceive it: it is not something given nor is it something predetermined.

This Great Reform of the State has to have some master lines through which to move. In this section I will not elaborate on the subject, but in any reform plan these lines should be maintained, and further studies should discuss and investigate how to reach them in the best possible way. These guidelines must allow the sustainability of the Spanish State in the long run and, fundamentally, make the Welfare State a help for the poor, not for extractive rents or for the enemies of the Nation, as we said. So the master guidelines for the Reform are:

- Administrative and legal recentralization and end of the autonomic system.
- Reform of the Central Administration in order to:
 - End duplicities.
 - Increase efficiency and effectiveness.
 - Carry out a strict spending policy, where no more than what can be spent is spent (spending thresholds).
 - Guarantee the sustainability of the Central Administration.
 - Maintain a correct ratio of civil servants with respect to employment, economic situation and, above all, real needs and what can be financed.
 - Make the Administration serve the Nation, and not the contrary.
 - Maintain labor standards and avoid corruption in civil servants exams. We all pay the Administration; it is not a placement company.
 - Fundamental reform of the Tax System, with a clear objective that is the reduction of the tax burden, as well as its efficiency, always going towards making the tax system a support to the Nation and the private sector, and never an obstacle to its growth and sustainability.
- Reform of the Welfare State:
 - Do not usurp the functions that the private sector is obliged to do.
 - Create a real welfare state and end any superfluous, corrupt aid, extractive rents or enemies of the Nation.
 - Ensure its sustainability in the long term with contingency plans for periods of crisis.
- Reform of the Pension System for (see previous sections):

²⁴⁰ Unemployment aid is that: a help, it is not a life salary so as not to have to work or look for work. The State has to provide facilities to the Nation for the creation of employment and simply intervene for charitable assistance, and only when the Nation cannot do so.

- Do everything possible to reform the pension system in such a way that it is sustainable in the long term, equitable, fair and in accordance with the needs of the country.
- Carry out an active population sustainability policy in Spain and incentivize employment creation.

4.5 The keys of what has been said and shown in this part, and in the entire work

From the measures that have been pointed out in this section as a conclusion, as well as from the analysis that has been made of the Spanish economy throughout the work, some key points can be drawn and several conclusions can be exposed, which deal with the behavior of the Spanish economy over the period analyzed and with the description, analysis and possible resolution of the great problems that the Spanish economy has suffered and still suffers and how they could be solved.

From the general analysis done through this work we can extract the following conclusions, of a general nature and that serve to get a complete idea of the analysis of the period:

- The "Late Industrial Revolution": the 1960s, which began with the Great Stabilization Plan of 1959, is a decade of enormous growth of the Spanish economy on all fronts: employment, population, real GDP, productivity, competitiveness, etc.; in relation to public accounts and the Administration, both public and private debt remained low, tax revenues were stable and Spain's financial position improved in relation to other countries. The 60s is also a decade of great openness of Spain to the world, where its economy starts to be liberalized little by little. In a certain way we can call this period the Spanish "Late Industrial Revolution", especially considering that Spain gets really industrialized during this period, having previously had a small, very localized and very specific industry.
- "The Great Stagnation": although the 1960s saw a huge growth in the Spanish economy, the challenges that lay ahead in terms of efficiency, development, industrial competitiveness, technological modernization, innovation, etc., were also great. For all these reasons, Spain arrived to the mid-1970s with a diversified and powerful production system, but archaic, somewhat inefficient and very high costs, not as competitive as before and over bureaucratized, especially in relation to the labor market. This fact, together with the conjunction of the oil crisis of 1973, a slowdown in the world economy during this decade and the political instability that led to the death of Franco and the transformation of the political regime, caused Spain to suffer economically from 1975 to approximately the early 1980 an important stagnation in the whole majority of economic indicators.
- "The Economic Farce": In this period, the foundations for a model based on low productivity services, tourism and real estate speculation will be laid and, later, consolidated and carried to its maximum expression. This entire period can be subdivided into two major stages of growth (1985 to 1993 and 1994 to 2007), ending the two with serious crises, especially the second: the Great Crisis of 2008.
 - The creation of the "Farce Model" (1985 - 1993). The entry of Spain in the 1980s was a major political change with the entry of the Socialist Party into the government for the first time in decades. This government carried out important transformations in the economy, largely forced by political interests, short-termism, external pressures - entry of Spain into the European Community in 1985 - and by the archaic situation of the Spanish productive system, which had not been properly modernized since the 60s and, therefore, had stopped being competitive. The government opted for the easy thing to do: instead of creating

a long-term industrial plan for the industrial and technological modernization of Spain, they decided to transition to a model where unproductive services, tourism and construction became the centre of activity for the Spanish economy and for the following two decades.

- The consolidation of the “Farce Model” (1994 - 2001): with the change of government new airs came into power, although for a short period of time. Due in part to the inertia of the model already created, the entry in Spain of cheap European capital especially after joining the euro, and some foreign pressures again - entry of Spain into the euro and consolidation of the European projects and its industrial divergences – as well as a consequence, again, of short-termism and electoralism, the previously created model was consolidated as the definitive growth model for Spain. Despite a change in government and in its colour, a seemingly more serious budgetary policy and a somewhat different economic policy, the trend continued towards the consolidation of this model, leading to its euphoria peak.
- The Great Bubble (2001 - 2007): this was the period of greatest speculative euphoria, a period of great economic growth of employment, with a massive influx of immigrants, with growth of Spanish GDP; it was a period of collective euphoria and unprecedented "Wealth Effect". However, it was a mirage that left the Great Crisis of the Farce Model.

Since the creation of this Model, Spain had lived throughout this period much lower rates of productivity growth, innovation, investment in R&D than many countries in its environment and lower than what it should have been if at the beginning of the 80s Spain would have opted for another type of economic model. In addition, this all has been joined by a dual, inefficient, inelastic and unfair labor system, which has greatly harmed employment. Meanwhile, the government has been increasing spending irresponsibly, corruption increased as a cause and consequence of the perverse needs of the economic model created, and, last but not least, immigration, uncontrolled for almost a decade, was a huge change for Spain.

Employment in Spain had traditionally been low - except during the mirage of the Great Bubble period - and unemployment had always been chronic, especially high and very sensitive to financial crises.

All these factors have been a direct cause of the creation of a new model during the mid-80's and, especially, they have been the direct cause of the enormously disturbing effects of the Great Real Estate and Housing Bubble, which dragged the economy for three decades until taking it to a dead end from which it still does not seem to have totally recovered.

- The Great Crisis (2008)²⁴¹: this crisis, the largest in many decades in Spain, of intense effects and of deep pain for Spain was the logical outcome for an economy that had bet everything on an economic model that produced great wealth in a short period of time, but which had no long-term foundation to rely on; that's to say: an unsustainable model in the long term. This Great Crisis, from which Spain has not yet recovered, has revealed enormous deficiencies and weaknesses in Spain - and not only economic, but also political -. For the preservation of the Spanish economy it is urgent that a group of measures can be carried out. Its main master guidelines should be:

²⁴¹ Villaverde et al. (2013) also discuss extensively on the fact of how a macroeconomic shock to an economy who had been suffering from a speculative bubble turns out to be more persistent and more difficult to overcome. See the section “Persistence of the effects of bubbles on governance and performance: causes and channels”.

- A new income distribution model where aproductive rents are repressed, while Labour and Business rents return to be the true engine of the economy.
- An intense labor reform that allows Spain to increase employment and reduce its chronic unemployment.
- A National Industrial, Technological and Energy plan for the real reconversion of the economy and for Spain to create quality employment, increase productivity, take the lead among innovative investment countries in R&D and, above all, try to fight in order to be at the head of the group of nations that will fight in the next Technological Revolution.
- The Great Recentralization and Reform of the Administration and the State, so that it becomes a promoter of economic development, efficiently and effectively; that makes the State sustainable in the long term and that ceases to be a burden for the Spanish Nation and a source of power for the internal enemies of Spain.

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5.6 Data extracts

My three main sources for data extracts from which I build my analysis are AMECO Database – from the European Commission –, OECD Library and World Bank Open Data base.

All of the data extracted comes from these three sources, if not otherwise indicated in a footnote:

- AMECO Database. *European Commission*. https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco/ameco-database_en (Accessed 2018-05-23).
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- Labour force survey, unemployment statistics; Eurostat, National or OECD Annotation: http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm (Accessed 2018-05-23).
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6 ANNEX: URKUND CONFIRMATION

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Cristóbal Millán Ruiz Final Research Paper HEC Paris – MiM Grande École 13 As we can see in the previous figure, the Spanish population has been growing since 1960, constantly but with moderation. We can observe how the relatively high ratios of the 60's - a decade of great expansion of the Spanish economy - have been gradually decreasing since the end of the 70's, coinciding with the transformation of the political Regime. During the decade of the 80's and 90's the growth of the Spanish population is especially low, and this trend only changes in an exaggerated way beginning in the late 90's and continues until the mid-2000s. After the Great Crisis, the trend changes completely, with the Spanish population stagnating and having even negative growth rates due to the important departure of many of the immigrants and part of the Spanish population. The above figure serves to observe the population changes in its different age groups. The greatest change, as we have been able to point out earlier, has occurred in births, which decrease greatly since the mid 70's and therefore we can see very clearly the decline in the population of Spaniards between 0 and 14 years. In turn, this movement is accompanied by an increase in the population over 65 years old, its turning point being in the mid-1990s, in which the population between 0 and 14 years old is for the first time less than the population over 65, which certainly puts in difficulty the Spanish population sustainability. -0,5% 0,0% 0,5% 1,0% 1,5% 2,0% 2,5% 0 5000 10000 15000 20000 25000 30000 35000 40000 45000 50000 1960 1963 1966 1969 1972 1975 1978 1981 1984 1987 1990 1993 1996 1999 2002 2005 2008 2011 2014 2017 Figure 1: Spanish Population Total Population annual growth rate (right axis) Total Population (left axis, 1000 person) -1,5% -1,0% -0,5% 0,0%

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to Anne-Prelle, me

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